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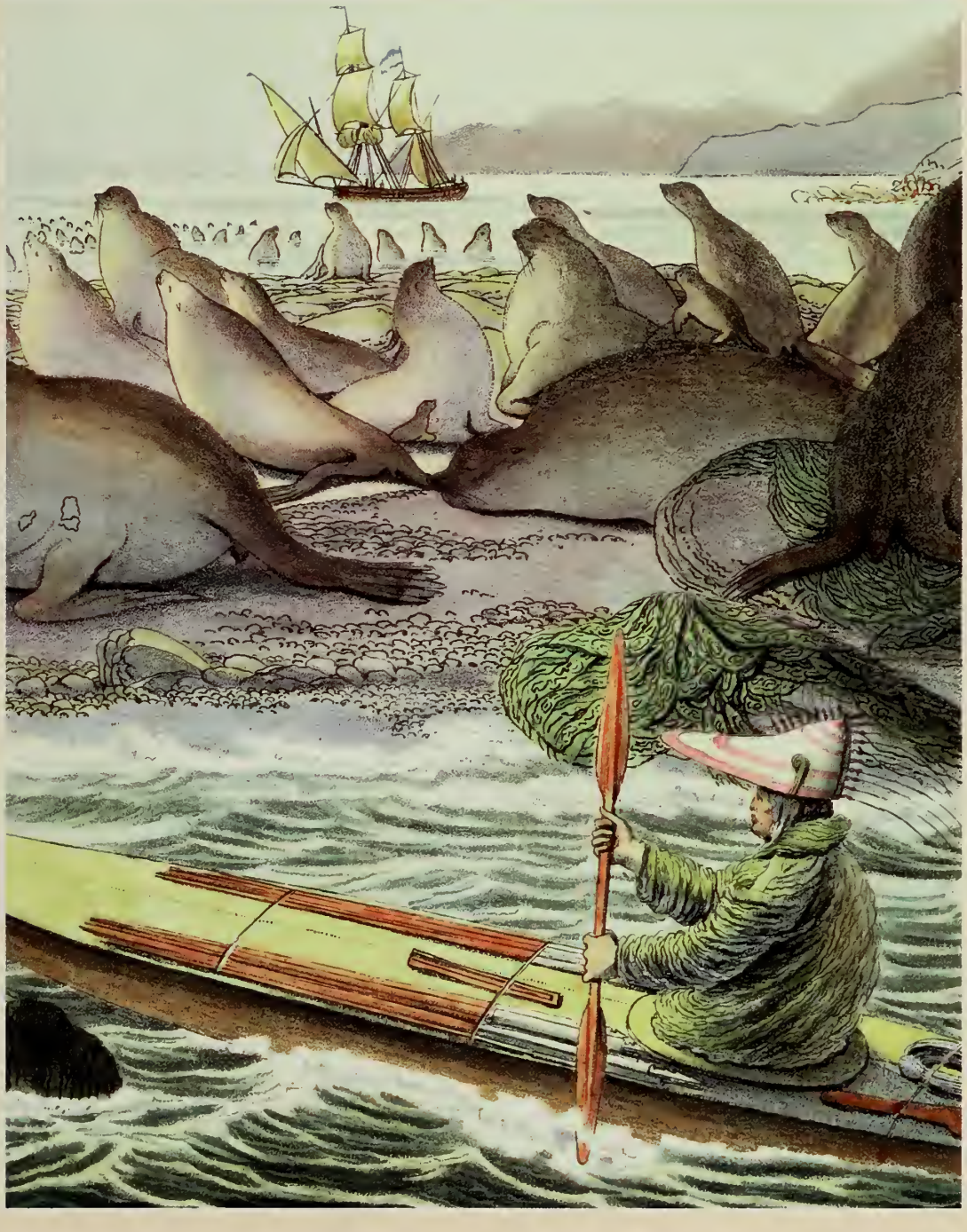

"Where We Found a Whale"

A HISTORY OF LAKE CLARK NATIONAL PARK AND PRESERVE

Brian Fagan

FEDERAL PUBLICATION

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As the nation's principal conservation agency, the Department of the Interior has resposibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering conservation of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation.

The Cultural Resource Programs of the National Park Service have responsibilities that include stewardship of historic buildings, museum collections, archaeological sites, cultural landscapes, oral and written histories, and ethnographic resources.

Our mission is to identify, evaluate, and preserve the cultural resources of the park areas and to bring an understanding of these resources to the public. Congress has mandated that we preserve these resources because they are important components of our national and personal identity.

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For Jeanne Schaaf with Grateful Thanks

"*Then she said: "Now look where you come from—the sunrise side."* He turned and saw that they were at a land above the human land, which was below them to the east. And all kinds of people were coming up from the lower country, and they didn't have any clothes on. When they arrived, they put on clothes, and when they did, they turned back into all kinds of animals again.

—From "Belief in Things a Person Can See and in Things a Person Cannot See,"
a Dena'ina tale from Peter Kalifornsky,
K'tl'egh'i Sukdu: The Remaining Stories
(Fairbanks: Alaska Native Language Center, 1984).

One man went out to sea in a one-hole skin boat to look for a whale. When he came to a sleeping whale, he shot a crossbow arrow into its blowhole and then he got away fast. The next day he looked for it and found it floating. He went home. And the south wind blew. When it stopped blowing then all the people from the different villages went to Polly Creek and looked for it. They found it floating and tried to move it toward shore. And at Polly Creek it drifted ashore.

Thus they named the place "where we found a whale."
—Peter Kalifornsky, *A Dena'ina Legacy—*
K'tl'egh'i Sukdu: The Collected Writings of Peter Kalifornsky
(Fairbanks: Alaska Native Language Center, 1991, p. 312.)

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Preface

"A raven, he said, brought the light from heaven, while a bladder descended at the same time, in which a man and woman were enclosed . . . ." Russian explorer Yuri Lisianskii heard this Alutiiq creation story on Kodiak Island in 1805. By blowing at the sides of the bladder, the primordial man and woman expanded their prison, then created mountains, the sea, rivers, and lakes, also plants and animals. Such creation myths trace pathways into the remote past, where mythic beings and animals created the natural environment. They explain the cosmos, define the living and spiritual worlds, and describe the beginnings of human life.

Native American creation stories explain a cyclical world, defined by the endless rotation of the seasons with their different foods, and the eternal realities of birth, life, and death. They define ethical conduct and identity in terms of a human existence once enjoyed by ancestors, one that will continue effectively unchanged for those not yet born. Dozens of such creation tales passed from generation to generation in southern Alaska, through recitations and storytelling on long winter nights, in small villages on Kodiak Island, and in the scattered communities that occupied the northern Alaska Peninsula and the shores of Cook Inlet for thousands of years. These oral traditions, and the experience passed along with them, defined the societies over this vast region for many centuries.

The history in these pages combines oral history with Western science, especially with archaeology. People think of archaeologists as romantic, swashbuckling figures in search of buried treasure and lost civilizations. In truth, few archaeologists are swashbucklers. They wouldn't last long in a science that demands rigorous excavation methods and a concern for conserving the past for the future. Today's archaeologists are team players who work with Native American communities and with scientists from all manner of disciplines, from botany and climatology to zoology and heritage management.

We archaeologists still spend a great deal of time studying artifacts, but we're as much concerned with the people behind the tools as with the implements themselves. For this reason, I've drawn on oral traditions and on archaeological research to write a multidisciplinary story of the past in all its fascinating diversity.

Archaeology is a product of Western science, of a curiosity about our forebears that dates back to well before Roman times 2,000 years ago. Whereas many oral histories commemorate cyclical human existence, archaeologists study linear history, a long span of human experience across the world that extends back as far as human origins, at least two-and-a-half million years. Archaeological time scales unfold in millennia and centuries, extending over thousands of years from the appearance of fully modern humans, *Homo sapiens,* ourselves, in tropical Africa over 160,000 years ago right up to Captain Cook's voyages and the Industrial Revolution of the eighteenth century A.D., and even into recent times.

Archaeology is the study of ancient human behavior, derived from artifacts and food remains, from house foundations, rock art, and all the surviving traces of earlier societies. It's also unique among the sciences because of its ability to study changing human societies over very long periods of time indeed. This ability makes archaeology an ideal discipline for writing a history like this one.

This book describes what is known about the human history of Lake Clark National Park and Preserve, a vast region on the western shore of Cook Inlet remarkable for its environmental diversity, and rarely if ever populated by large numbers of people. Humans have lived in what is now the Park for at least 10,000 years, a time span of linear history that runs parallel to the oral traditions of the local Native societies. The population of the entire Park probably never exceeded a few thousand people at the most, and that late in ancient times, after 1,000 years ago. Most of them were constantly on the move, hunting, foraging for plant foods, and fishing.

Despite a frustrating lack of information, I've been able to develop a coherent story, using recent investigations of two important rock art sites in the Park and drawing heavily on what is known of neighboring areas like Lake Iliamna, the Katmai area, the Kenai Peninsula, and Kodiak Island. Such historical extrapolations are possible because the Lake Clark coastline and interior were parts of a much larger cultural world for thousands of years. At European contact, the convoluted islands and shorelines were a maritime realm of increasingly elaborate societies that lived off fish and sea mammals, sometimes to the virtual exclusion of all other foods. This was also a world of interconnections, where communities near and far exchanged essential commodities and exotic objects of all kinds. Strong ties of kin, of clan membership, and of descent through the maternal line linked groups separated by often-stormy seas.

The center of this maritime universe lay on Kodiak Island and adjacent shores. Far fewer people lived on the nearby mainland coasts, but there was constant summer traffic between Kodiak and the rest of the Alutiiq world. For generations, the margins of this world had touched on the Lake Clark shore. Tides run strongly here, draining shallow estuaries and exposing huge mud flats and sand banks at low tide. The coast faces the exposed waters of the Gulf of Alaska, which can break in steep-sided swells on the land. Savage Pacific storms pound the coastline. I believe this was a shore that was visited in summer, especially by whale hunters, and not a place that supported large Alutiiq communities over many generations. The Lake Clark shore was a distant place that offered few easy landings or bays sheltered from the prevailing winds.

What is now the Park formed part of a fluid, ever-shifting frontier between Alutiiq groups and Dena'ina, Athapaskan-speaking terrestrial hunter-gatherers whose roots also go deep into the remote past. Their ancestors were caribou and moose hunters, who preyed on a wide variety of game and consumed a wide variety of plant foods. The Dena'ina were unique among Athapaskan-speaking groups, for they were the only ones to live along the coast. There they came in contact with Alutiiq hunters, from whom, at some point, they adapted the kayak, the skin-boat, and weaponry for hunting seals and other sea mammals. Some of these contacts were hostile. There were traditions of raiding and warfare. Dena'ina populations were usually small, but each group maintained connections with fellow kin and other bands living over an enormous area of the interior. After about a thousand years ago—the precise date is debated—the Dena'ina occupied the Lake Clark coastline, and, apparently, the Alutiiqs became less regular visitors. Our only fleeting memory of them comes from a Dena'ina oral tradition from a creek at the mouth of the Tuxedni River, "where we found a whale."

Our history is a patchwork that begins on a continental scale, with the first settlement of the Americas, perhaps about 15,000 years ago. From there, we describe the faint traces of very early settlement of the Lake Clark region, then the efflorescence of maritime culture along the coast and on Kodiak Island at least 6,000 years ago. These societies were the remote ancestors of the Alutiiq people of today. Three chapters then describe the rock art from Tuxedni and Clam Cove rock shelters, these two locations being the most important archaeological sites known in the Park preceding the Dena'ina. Then we trace the history of the Dena'ina and describe the fragments of their past to be found in the sparsely inhabited interior and along the coast. A final chapter then describes the traumatic consequences of European contact in the late eighteenth century and beyond.

This isn't a story of great monarchs and paramount chiefs; rather, it is a tale of people adapting to, and thriving in, one of the most demanding maritime and terrestrial environments in the world. The heroes of this narrative lived and labored far from the spotlight of history. We have only a mosaic of oral traditions, ethnographic studies, and archaeological sites to tell their stories. But we know enough of them to be in awe of their ingenuity, brilliant innovations, and opportunism.

Author's Note

Writing this book involved making a series of arbitrary decisions about terminology and common usages. In some instances, these choices meant glossing over often long-running academic debates, which are irrelevant to the objectives of this account. Readers interested in tracking these controversies should refer to the more specialized references at the end of the book.

Archaeological terms: Whenever possible, I have avoided using technical archaeological terminology. Cultural terms used in these pages are those employed commonly in the archaeological literature. They are purely arbitrary and based on well-established criteria. Most of them in this region are named after self-evident geographical locations or key archaeological sites described in the narrative.

Dates are expressed in years A.D./B.C., and occasionally in years before present where the context warrants it. Here, I have followed common usage in the literature. Radiocarbon dates are calibrated to calendar years according to the latest available tables.

Lake Clark National Park and Preserve: Rather than using the full title in the text, I have arbitrarily shortened it to Lake Clark Park, or even occasionally Lake Clark, when it's obvious that I'm referring to the Park and not the lake of that name.

Measurements are given in miles, feet, and inches, with metric equivalents. Today, most archaeological researchers use the metric system, so some minor conversion inaccuracies are inevitable. I have rounded up or down some conversions for convenience.

Place names reflect the most common usages, and, in the case of archaeological sites, those in the literature.

Tribal names follow common usage. However, in the interest of clarity for a general audience, I have used the following:

- Aleut instead of Unanagan, a usage now beginning to appear in academic literature and elsewhere.
- Alutiiq (pl. Alutiit, but commonly Alutiiqs or Alutiiq people) is commonly used to refer to the maritimepeoples of Kodiak Island, adjacent Alaska Peninsula areas, the Cook Inlet region, and Prince William Sound.
- Dena'ina are Athapaskan-speaking people who were occupying the Lake Clark Park area at European contact. The Russian-derived term Tanaina (Kennitze is also common) occurs in the earlier literature and is sometimes still in use. I have used Dena'ina here.
- *Angyaq* (pl. *Angyat*) were the larger, open skin-covered boats used in southern Alaska. Eskimo groups to the north used the term *umiaq* for skin boats. Kayaks (*qayap/qayat*) are, of course, also skin-covered craft.

Illustrations: As much as possible, I have used Alutiiq and Dena'ina images for the illustrations. In some cases, however, I have drawn on Alutiiq and Inuit pictures in a generic sense to illustrate an activity like hunting whales or catching cod, as the methods varied little from one area to the next.

Readers interested in delving further into the complex literature surrounding the narrative that follows will find signposts in the Learning More section at the end of the book.

Acknowledgements

This book was written under Cooperative Agreement No. 9910-7-0014, Amendment 16, between the National Park Service and the Alaska Association for Historic Preservation, for the conservation and interpretation of pictographs in Lake Clark National Park and Preserve.

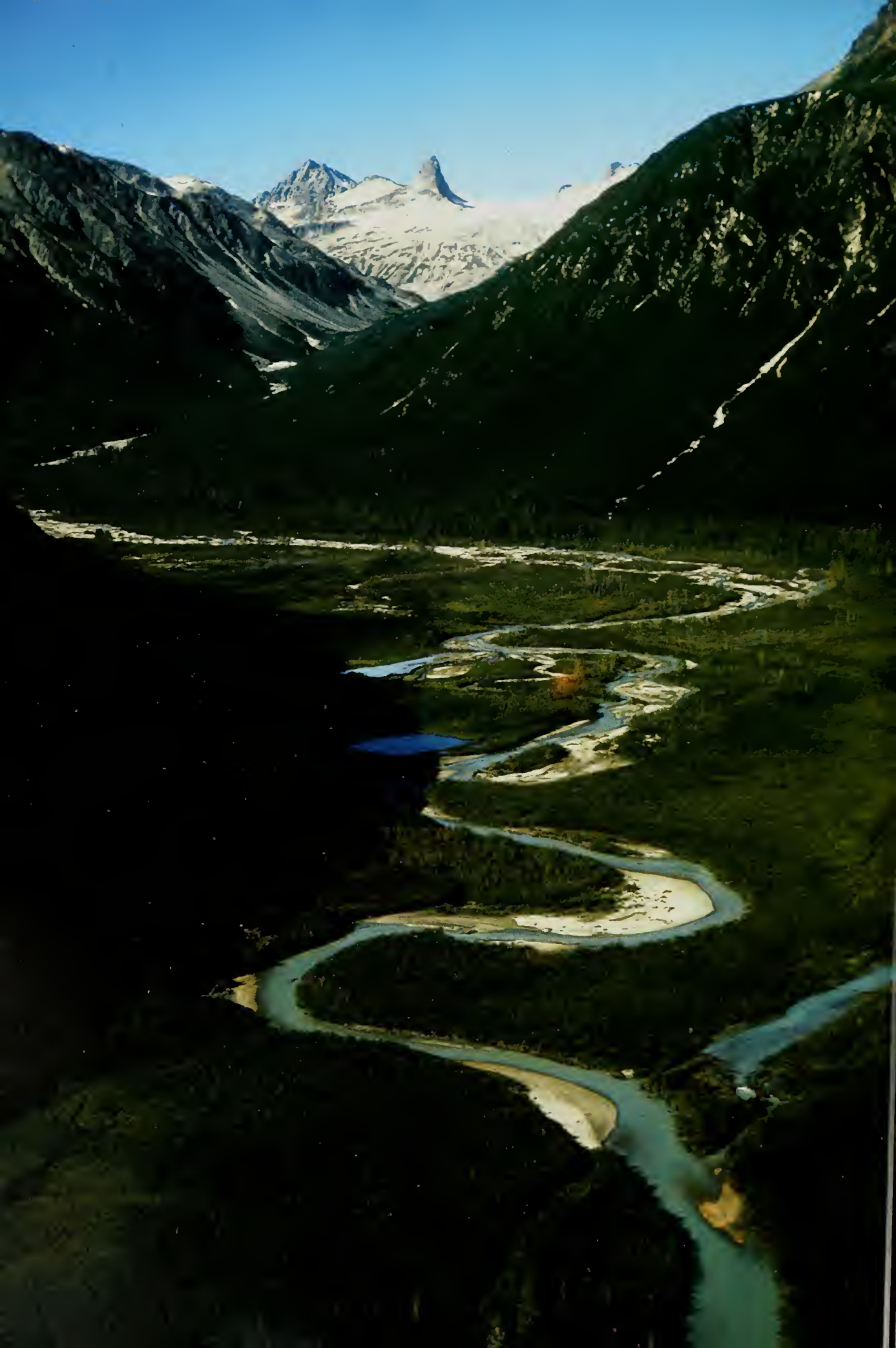
My greatest debt of gratitude is to Jeanne Schaaf, National Park Service Chief of Cultural Resources for Lake Clark, who commissioned this book, took me on a memorable visit to the rock art sites, Nondalton, and the Lake Clark Park, and was a tower of support and encouragement throughout the project. This book is in considerable measure hers, and the least I can do is dedicate it to her. Melissa Baird's work on Clam Cove and Tuxedni rock shelters provided a solid basis for three chapters of the book. I am grateful to her for reading the relevant chapters for accuracy of reportage. Archaeologists Doug Reger, Patrick Saltonstall, Amy Steffian, and William Workman provided technical advice and read the manuscript in draft, thereby saving me from many intellectual sins. John Branson, the Park Historian, reviewed Chapter 9, so that I benefited from his unrivaled knowledge of the history of the Park.

Acquiring the illustrations for the book involved assistance from many people. I'm particularly grateful to Sven Haakanson and his colleagues at the Alutiiq Museum in Kodiak for their enthusiasm and support, also for the hard work they put in on photographing artifacts in their collections for the museum. I am also grateful to the donors of some of these objects for allowing them to be reproduced in the book. Individual credits are given in the captions. Francelle Carapetyan valiantly undertook the photographic research for many of the images. Archivists at the Alaska State Library and the Elder E. Rasmuson Library of the University of Alaska, Fairbanks, gave willing assistance. It was a pleasure to deal with such efficient and enthusiastic people.

In Alaska, Dave Wilder of Lake and Peninsula Airlines flew us skillfully through the Lake Clark valleys despite ever-shifting visibility that at one point was practically zero. David Coray of Silver Salmon Lodge provided warm hospitality. He was an expert guide and skipper, who wafted us effortlessly to the Tuxedni Estuary and Clam Cove. I'm in awe of his skills at high speed navigation in very shallow water.

In Santa Barbara, my friend Shelly Lowenkopf was his usual supportive self. We discussed various drafts of the book from beginning to end. I appreciate his perceptive editorial comments. Kari Callaghan Mazzola of Missoula, Montana skillfully copyedited the manuscript. Steve Brown designed the book and completed all the graphics. His skilled work speaks for itself.

BRIAN FAGAN
Santa Barbara, California

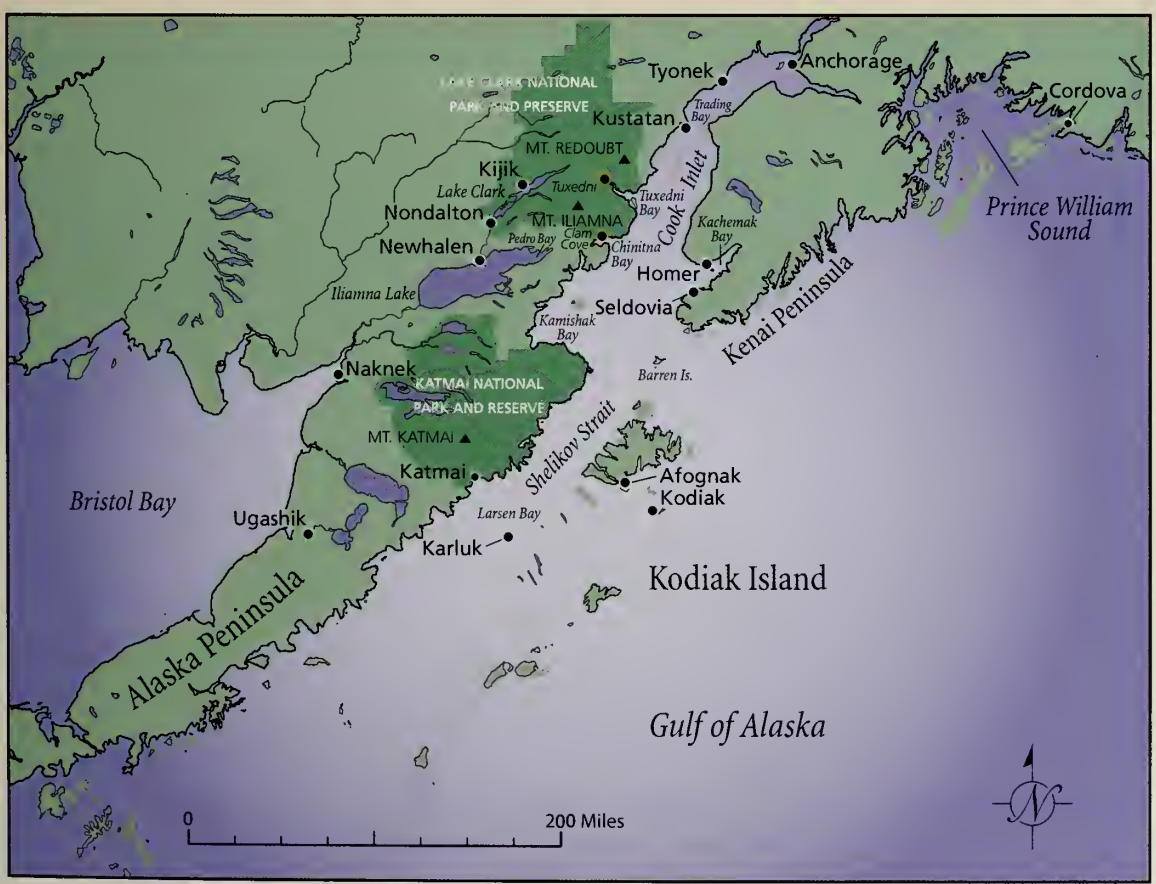


1

Setting the Stage

Our Cessna flew through the deep mountain valleys of Lake Clark Park and Preserve, carved thousands of years ago by long-vanished Ice Age glaciers. High above us, snow-clad peaks lurked in swirling clouds. The wings seemed only a few feet away from gray scree and steep cliffs. Far below, a wide river cascaded in sharp meanders through twisting defiles between the surrounding peaks. We climbed sharply over a steep ridge that led to the Cook Inlet shore to the east.

Suddenly, the gloom swooped down upon us. Visibility dropped to almost zero. I sat glued to my seat with visions of rugged boulders and precipitous slopes. Our pilot sat calmly at the controls, a relaxed smile on his face. He set us into a gentle descent. In moments, we broke through the drifting gray. A vast panorama of high peaks, coastal plain, and blue sky opened up under the clouds. Cook Inlet stretched out ahead—landscape on a grand scale. I felt puny in the face of wilderness.



1.1 Map showing general features of the area. Current and former settlements are shown.

Lake Clark National Park and Preserve, established in 1980 by the Alaska National Interest Lands Conservation Act, is only 240 miles (386 km) southwest of Anchorage on the west side of Cook Inlet and at the north end of the Alaska Peninsula. Convenient for public access, one might think, but this is one of the least visited parks in the National Park system. There are no access roads. Only about 5,000 visitors a year come here, to watch bears and birds, to fish, and to hike. Most arrive in this spectacular place as I did, by small aircraft, many of them in float planes; some arrive by boat. There are no other means of access. The Park is one of Alaska's great secrets.

A Glacial Landscape

Glaciers, cliffs with 150-million-year-old fish fossils, Dall sheep calmly browsing on treacherous hillsides, freshwater lakes, magnificent salmon spawning grounds, and active volcanoes—Lake Clark Park is a wild, complex place. The Park covers 4 million acres (1.6 million ha) of coast and interior, straddling the Chigmit Mountains in the south and west, which are part of the Aleutian Range, the most volcanic peaks in North America. There are active volcanoes in the Park, too. Mount Redoubt, at 10,197 feet (3,108 m), and Mount Iliamna, at 10,013 feet (3,052 m), are the highest mountains in Lake Clark Park. Mount Redoubt erupted in 1989–1990. Mount Iliamna erupted about 300 years ago, and possibly as recently as 90 to 140 years ago.

The mountain ranges define the rugged interior, but there is far more. The Park is not all high peaks. Lake Clark Pass, at 1,049 feet (320 m) above sea level, provides access to the Neacola Mountains in the north central part of the Park, which is part of the Alaska Range. The lake itself, in the heart of the Park, is 49.7 miles (80 km) long and over 1,049 feet (320 m) deep, a magnet for both animals and humans since the first hunting bands moved into the region at least 10,000 years ago.

1.2 Mount Iliamna from Cook Inlet. PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE

1.3 Looking down from Craig Mountain at Twin Lakes, Lake Clark National Park and Preserve. NATIONAL PARK SERVICE

Nearby Lake Iliamna is the second largest lake in the United States after Lake Michigan, a watering and feeding place for caribou. Ancient trails once linked the lake with nearby Chinitna Bay and Bristol Bay to the west. Fast-flowing rivers fed by mountain glaciers are the lifeblood of the ecosystem of the interior, among them the Kijik River, which enters Lake Clark *(Qizhjeh Vena)* at the site of a historic village, described in Chapter 9. The many glacial lakes and rivers in the Park nourish the nearby Bristol Bay salmon fishery, one of the largest in the world.

The Park is part of the Pacific Ring of Fire, where seismic and volcanic activity is unceasing. Cook Inlet and its environs have witnessed earthquakes and tsunamis, volcanic eruptions, and other cataclysms. Such events can alter coastlines, create new land, or submerge miles of the shore in minutes or hours. All these, and other, complex geological factors have helped create extremely diverse environments through the Lake Clark area. The Park bears the scars of massive glaciation. You fly over U-shaped valleys and steep mountain slopes of a classic glacial landscape, scoured by retreating ice sheets over thousands of years.

During the last Ice Age, which ended in rapid, if irregular, warming about 15,000 years ago, both the Park and neighboring Cook Inlet were heavily glaciated. As late as 10,000 B.C., a large glacier, identified from ridges of glacial debris and studies of submarine valleys, covered much of the coastal plain of the Gulf of Alaska, where it calved into open water. Glacial ice also mantled much of the Aleutian Islands. By 11,000 B.C., however, the ice was receding. Global warming had accelerated. As the glaciers retreated, vegetation migrated into the newly exposed landscape. Fossil pollen grains tell us the story of a ground cover of shallow-rooted tundra

1.4 A glacial landscape scoured by advancing and retreating ice in the Trail Creek region. PHOTOGRAPH BY LEE FINK, NATIONAL PARK SERVICE.

giving way to scrub, with oceanside meadows, low thickets, and cottonwood and poplar stands around Kachemak Bay on the Kenai Peninsula, which flanks the eastern shore of Cook Inlet, and presumably on the other side of the Inlet as well.

The basic topography was in place by at least 8000 B.C. We know little of the subsequent glacial history of the region, but there were long dormant periods. The picture comes into sharper focus in recent times, when maritime societies flourished in the Kodiak Archipelago to the east and across the Cook Inlet. There was a marked advance by glaciers around Kachemak Bay between A.D. 400 and 500, followed by a quick retreat, which culminated about A.D. 1100, at the height of a warmer interval, globally known as the Medieval Warm Period. From the 1300s until the mid-nineteenth century, the climate once again cooled during the so-called Little Ice Age, a time of sudden temperature swings, mountain glacier expansion, and frequent cold snaps well-documented in Europe and western North America.

A Land of Two Worlds: The Interior

For thousands of years, two ancient worlds lived alongside each other here, aware of each other's existence, occasionally interacting with each other, even engaging in sporadic trade and warfare. The frontier between them was always fluid and permeable. One world lay in the interior, where terrestrial hunter-gatherers, the ancestors of the Athapaskan-speaking Dena'ina people, thrived for millennia. The other encompassed the outer waters and coastlines of the Cook Inlet, the Alaska Peninsula, and Kodiak Island, a maritime universe where people lived off fish, mollusks, and sea mammals.

Each world had its own technologies, its own institutions and rituals, separated by a deep cultural chasm forged in part by different environments.

Small numbers of humans lived in the interior for as long as 10,000 years, but it was never a land of plenty. The harsh climate, rough terrain, and relatively sparse (but diverse) animals and plants could not support more than a few hundred people. These few people may not have had plenty, but they had diversity. Forty-seven species of terrestrial, subarctic mammals thrive in Lake Clark Park, including the 40,000-head Mulchatna caribou herd (down from 175,000 in 2001), Dall sheep, moose, wolves, and, of course, numerous bears. Over 125 bird species have been seen in the Park, many of them seasonal migrants. Salmon, grayling, pike, trout, and other fish are plentiful.

Exploiting the interior was a challenge. Rugged topography, fast-running streams, and diverse, often virtually impenetrable, ground cover made travel difficult. Alder grew in drainages and on mountain sides. Scrawny spruce trees flourished in swampy areas and on the Alpine tundra at higher elevations in the Park. The tundra came as a welcome relief to ancient hunting bands moving around on foot. A treeless zone with a short growing season that abounded in mosses and lichens, this was a prime habitat for caribou. Edible plants abounded during the short growing season, among them blueberries, which Native Alaskans still use to make a form of "ice cream" made of bear fat, sugar, fish, and berries. Caribou fed on Caribou Moss, also known as Reindeer Lichen, which grows in well-drained environments. The local Dena'ina once boiled the moss and used the juice as a cure for diarrhea. Even if wild foods, whether animal or plant, were insufficient fare for more than a very sparse, usually mobile population, for the ancient hunter-gatherers, the Park area provided all kinds of edible resources. The area was also a major trade route between the Pacific and Bristol Bay.

Caribou and Dall sheep browsed at high altitudes during the summer, partly to escape the swarming mosquitoes of the warm months, but most human activity unfolded in the valleys, by the edges of streams, at strategic caribou crossings, and along the shores of the Park's numerous lakes. Anyone living in the interior subsisted off game large and small, spring salmon runs, some freshwater fish, and summer plant foods, which meant that they were constantly on the move and covered enormous distances during the course of the year. Humans and animals alike used the same tracks that wound from sea level from valley to valley, lake to lake, trodden for thousands of years as the most convenient ways to traverse a rugged landscape.

1.5 Caribou in the Park in winter. PHOTOGRAPH BY PENNY KNUCKLES, NATIONAL PARK SERVICE.

There were rarely large villages in the interior, until after 900 years ago when they appeared in the Kijik area on the north shore of Lake Clark.

Few if any dense populations thrived on the coast, even a thousand years ago when Kodiak Island supported large, permanent fishing villages that thrived on sea-mammal hunting, salmon fisheries, and trade. Few traces of the ancient inhabitants are to be found, partly because there were few of them, and also because they used portable tool-kits and dwelt in houses built of easily perishable materials. Only about 140 archaeological sites are known from the entire Park, most of them little more than small stone artifact scatters. There are certainly many more awaiting discovery.

1.6 Salmon abound in the region. NATIONAL PARK SERVICE.

A Land of Two Worlds: The Coast

Then there was the coast. The 123 miles (198 km) of Park shoreline along the western side of Cook Inlet form a contrasting environment of sandy beaches, bays, and tidal estuaries. The great Inlet defines the long history of this region, for it is a major break in the mountain barrier that borders the Pacific Ocean. In the Upper Inlet, the environment is more estuarine and riverine, while the Outer Inlet is strongly influenced by the Gulf of Alaska and a much wider maritime world.

Seismic activity has manipulated the coastline in drastic ways. An earthquake in March 1964 dropped much of the East Cook Inlet shoreline up

1.7 Boreal forest in the Park. PHOTOGRAPH BY JEANNE SCHAAF. NATIONAL PARK SERVICE

to 4 feet (1.2 m). An even more catastrophic seismic event occurred in about A.D. 1170, submerging parts of the Kenai Peninsula coastline. These earth movements, and sea-level changes wrought by post-Ice Age global warming, caused many archaeological sites to lie well below high tide and destroyed many others, frustrating the deciphering of the early history of the region.

The marine environment is challenging even without these occasional events. The eastern shores of the Inlet are more sheltered than the western Lake Clark side, which is exposed to Pacific storms and steep-sided deepwater swells from the Gulf of Alaska. Strong winds batter the coast during winter gales, when heavy rainfall brings flooding. Rainfall varies dramatically from one place to the next.

The tides run swiftly, with an enormous range of up to 18 feet (5.5 m), one of the largest in the world. At low tide, huge mud flats and sandbanks extend from shore, as estuaries large and small effectively dry out. The shallows are fine deposits of rock ground from the high mountains of the Alaska Range, transported to the Inlet by some of Alaska's largest rivers. There are few sheltered anchorages, but some good beaches for open skin boats and kayaks at high tide, especially in Chinitna Bay and the Tuxedni Estuary. Landing is difficult except

1.8 Chinitna Bay and typical Lake Clark Park coastline.
NATIONAL PARK SERVICE.

around high tide. Add to the equation the exposure to winds blowing straight onshore from the Pacific, and you have a combination of a lee shore and shallow water that is potentially lethal, especially to paddlers. This was not a shoreline that people hugged closely, and was probably one that was visited only in summer when conditions were quiet and watercraft could enter a few deeper estuaries. For those who did venture here, the sea life was plentiful enough. Salmon and halibut abounded, as did harbor seals, Steller sea lions, and various whales. These included killer, beluga, minke, and humpback whales, a pod of the latter gathering at the mouth of Tuxedni Bay every spring. Littleneck, razor, and soft-shell clams were plentiful in rich shellfish beds in Chinitna Bay, in the Tuxedni Estuary, and along the shore between the latter and Polly Creek. The saltwater marshes at the head of the two estuaries were important spring habitats for brown bears.

Even in summer, steep swells generated far away in the offshore Pacific can batter the shore at high tide. Ancient visitors in kayaks and larger skin boats would have trodden carefully here, watching their tides and the weather before approaching what was all too often a perilous lee shore. Unlike Kachemak Bay on the other side of the Inlet, or further down the Alaska Peninsula, or Kodiak Island, no fisherfolk dwelt in large, permanent villages here. This was a place you visited, rarely lived in for any length of time if you were a maritime hunter, a very different world from the interior, where people lived year round. Some Dena'ina did build winter houses behind beaches where clams were plentiful and sea mammals came ashore, but their main hunting territories were inland.

The focus of ancient settlement in the Outer Inlet was in Kachemak Bay across the Inlet from the Lake Clark shore, where probably no more than 200 to 400 people dwelt at the best of times. A visit to the Lake Clark side involved a passage of 20 miles (32 km) or more over open, current- and tide-swept water. To paddle there required a powerful incentive—perhaps belugas or salmon runs, or, perhaps most compelling of all, isolated places where ritual activities took place away from public scrutiny. There was also major trading activity between Kodiak and the Bering Sea coast to the north, especially in ivory, said by Russian sources to have come from Bristol Bay.

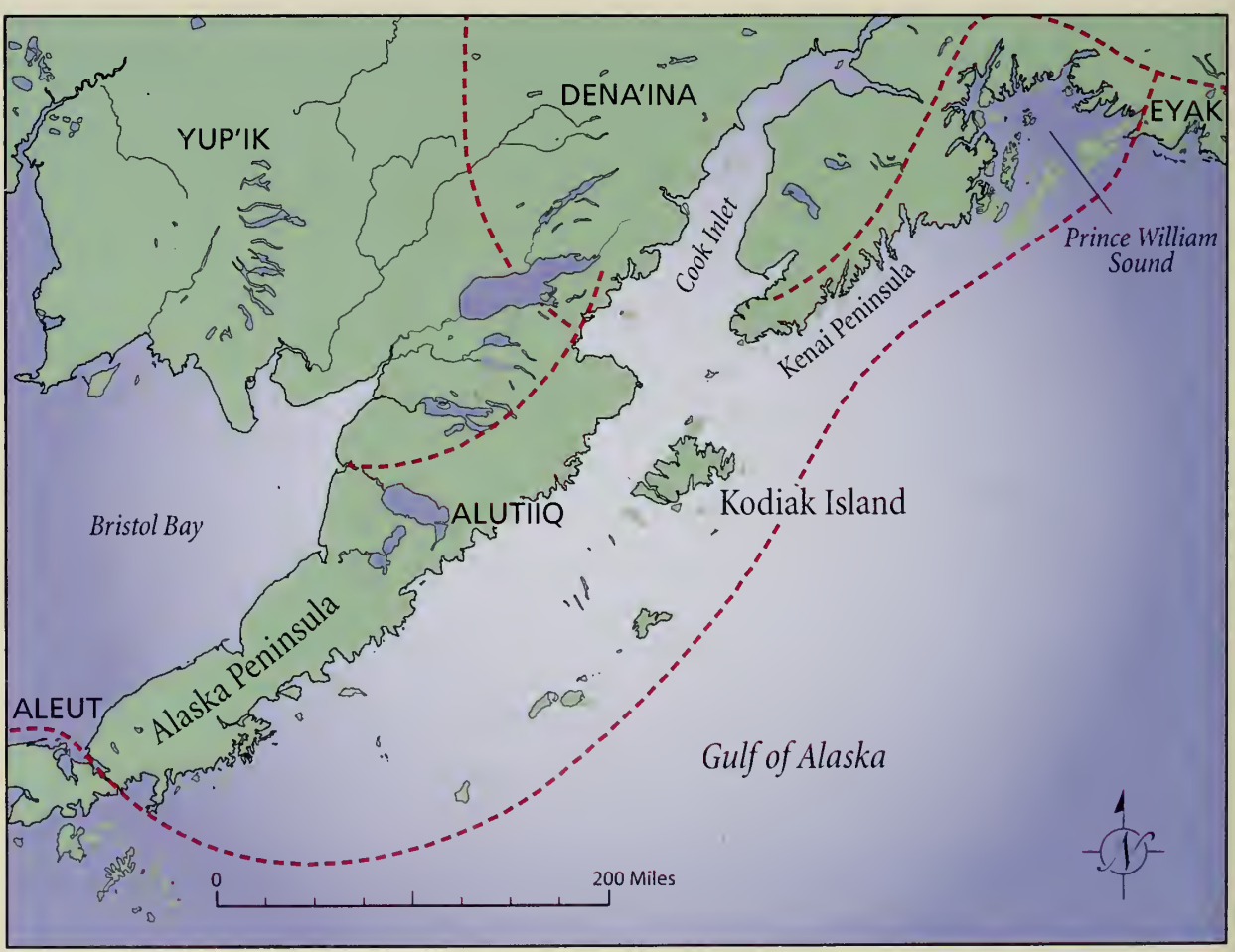
The Native People

For thousands of years, scattered bands of people, probably Athapaskan, hunted and foraged in Lake Clark Park's interior (see Chapter 8). They were not seagoing folk, but interacted occasionally with the maritime groups of a different cultural tradition, who exploited the waters of the Outer Cook Inlet. After 1,000 years ago, the densest populations of these Alutiiq-speaking people were on Kodiak Island, but ties of kin and trade networks linked communities on the Alaska and Kenai Peninsulas with Kodiak Island and those who visited the Park's shore. It's safe to say that Kodiak and Amalik Bay on the Alaska Peninsula were the defining presences in the Outer Cook Inlet, linked to outlying communities by important ties of reciprocity and obligation reflected

in feasting and the exchange of food, raw materials, and exotic objects and ornaments. The first settlement of Kodiak by at least 5500 B.C. was quite possibly the beginning of local history in human terms, especially in the exploitation of the maritime environment that followed.

Alutiiq communities thrived on fishing and sea-mammal hunting. The men learned to go to sea in kayaks and larger skin boats, using hunting and fishing methods that had developed deep in the remote past and remained basically unchanged for thousands of years. Hunting technology, especially harpoon weaponry, became more effective and refined, but the basic practices, and the ritual beliefs behind them, survived through generations. Over the centuries, Alutiiq society developed social ranking and acquired considerable elaboration (see Chapter 4), but the groups that exploited Kachemak Bay and the Lake Clark coast appear to have retreated from these locations, perhaps in the face of Dena'ina encroachments in about A.D. 1000; the issue is much debated. The newcomers adopted some of the practices of their predecessors, such as hunting from kayaks, but seem not to have developed a full-fledged maritime economy. Like the Alutiiqs, they knew full well the harsh demands of their homeland, where survival depended on meticulous risk management and a grounding in the tried and familiar.

The Outer Cook Inlet, and especially the Lake Clark shore, was a fluid cultural frontier between interior and maritime societies. This was a world



1.9 Approximate distribution of Native peoples at European contact.

1.10 Aleutian kayaks in a wash drawing by John Webber, artist with Captain James Cook.
FROM *COOK'S VOYAGE*, VOL. 3, 1784 ALASKA STATE LIBRARY.

where people remained in sporadic contact over long distances, where cultural influences, dialects, ideas, and rituals passed effortlessly over long distances, even if their impact was only rarely of fundamental historical significance.

This historical fluidity, the constant mobility of groups large and small, and the sheer paucity of the archaeological signature left by the ancients make the archaeologist's task a challenging one by any standards.

The Archaeologists

Archaeologists and anthropologists have labored in this region since as early as the 1870s, when Smithsonian geologist and paleontologist William H. Dall, of Dall sheep fame, collected the remains of some highly revered ancient whalers from the outer islands, as part of a widespread expropriation of human skeletons from native sites in many parts of North America. These set the stage for the efforts of Ales Hrdlicka (1869–1943), an internationally known and aggressive biological anthropologist, who was a Curator of Anthropology at the Smithsonian Institution in Washington,

D.C. Hrdlicka acquired thousands of human skeletons from around the world for the Institution's collections before coming to Alaska for the first time in 1926. Between 1929 and 1938, he spent nine summers in the state, spending much time on Kodiak Island and in the Aleutians. He collected so many ancient and modern human remains, notably from the Uyak site, that he became known as the "skull doctor." At the same time, he was measuring numerous living individuals. A ruthless collector, Hrdlicka even dug up victims of the great influenza epidemic of 1918. He excavated several Kodiak sites strictly for their burials, an ethically indefensible form of research today. His collections from the Uyak site were repatriated to Kodiak in 1995. Alaska Natives continue to repatriate other collections. In his defense, by the standards of his day, Hrdlicka was a sound researcher. His ethnographic work was superb and is still valuable today. He translated many original sources and carried out a thorough archaeological survey of Kodiak's coast, locating many of today's known sites.

1.11 Frederica de Laguna. COURTESY OF BRYN MAWR COLLEGE LIBRARY

Significant archaeological research in the Outer Cook Inlet region came at the hands of Frederica de Laguna (1906–2004), widely known as "Freddy," today an icon of Alaskan archaeology and anthropology. She studied anthropology at Columbia University under the famed anthropologist Franz Boas, who became an important mentor for her. Her first fieldwork took her to Greenland in 1927, where she worked with the Danish archaeologist Therkel Mathiassen and acquired a lifelong passion for the arctic.

Freddy first came to Cook Inlet in 1930 to collaborate with another Dane, Kaj Birket-Smith of the National Museum of Denmark. He fell ill, so she worked on her own, accompanied by her younger brother, Wallace. At first, they located sites in Prince William Sound, traveling everywhere in a small outboard skiff. When William went back to school, Freddy turned to a local trapper and fisherman, Jack Fields. They worked so well together that their alliance continued into later seasons. In 1931–1932, Freddy excavated major sites on Cook Inlet, including the Yukon Island site in Kachemak Bay. She also surveyed the Tuxedni Bay and Tuxedni Estuary on the Lake Clark side, when she recorded the rock paintings described in Chapter 5. This seminal fieldwork culminated in her classic monograph *The Archaeology of Cook Inlet, Alaska*, which appeared in 1934. All subsequent research in the area is based on her work.

Meanwhile, Freddy studied a small group of Eyak Indians in 1933 with Birket-Smith, as well as the Chugach Eskimo. Her monograph *Chugach Prehistory*, published in 1956, is still of fundamental importance. Freddy spent most of her career at Bryn Mawr College, and also carried out long-term research among the Tlingit of Southeast Alaska and the Atna Athapaskans of the Copper River region. Frederica de Laguna was a superb writer and gifted teacher who left a lasting impression on Alaskan

1.12 Agafia Trefon at Tanalian Point, c. 1912, with a parasitic jaeger. PHOTOGRAPH BY FREDERICK K. VREELAND IN 1912, NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION, NO.H-216.

anthropology. This book would not have been possible without her pioneering work. I was privileged to meet her once in Anchorage years ago, and to enjoy a brief conversation with her.

Alaskan archaeology has burgeoned since Frederica de Laguna's day, partly as a result of expanding academic research by scholars from many universities, but also because of antiquities legislation that has mandated archaeological surveys and excavations of many kinds. Native authorities have taken initiatives to preserve their heritage in the face of a tidal wave of industrial development and the rapid erosion of traditional ways. Each summer brings archaeologists to Cook Inlet, Prince William Sound, and Kodiak. Since 1974, seven major and various minor excavations have been carried out in Kachemak Bay alone.

Lake Clark has not received as much attention as more accessible areas with richer archaeological records. Research there is in its infancy, partly because the logistics of working there are both complex and expensive. Archaeologist Joan Townsend worked at the Pedro Bay site on the northeast shore of Iliamna Lake during the 1960s and uncovered a location occupied sporadically between 2500 B.C. and historic times, when Dena'ina groups visited the place. National Park Service surveys began in the 1970s in the interior, and later covered part of the coast, as well as the Kijik area of Lake Clark. A four-year survey that ended in 2005 examined ten areas near the major lakes in the Park, with the objective of recording as many sites as possible. The researchers, led by David Tennessen, recorded new sites with radiocarbon dates of 10,000 years.

Two archaeologists, James VanStone and Joan Townsend, excavated a historic Dena'ina settlement at Kijik by Lake Clark in 1965–1966, described in Chapter 9. Joan Townsend also recorded and excavated the Clam Cove rock shelter with its pictographs in 1968–1969 (see Chapter 6). The Tuxedni rock shelter visited by de Laguna in 1932 is so remote that a full scientific team did not visit it until 1987 (see Chapter 5).

The Tools at Hand

Most, but not all, archaeology carried out in Alaska today is what is known as Cultural Resource Management—excavation and survey mandated by federal and state legislation in advance of any form of development on publicly owned lands. Lake Clark comes under somewhat different guidelines. The Park Service has a resource-management mandate that requires it to inventory, document, and understand the prehistoric sites in its charge, as well as carry out basic research. All of this reflects a different environment for archaeological research than even a quarter century ago. We archaeologists now spend almost as much time worrying about the management and conservation of archaeological sites as we do excavating them—which is how it should be, given the wholesale destruction of such locations in recent years. Today, any form of excavation is kept to a minimum because it results in the permanent destruction of the site—the archive of the past. Today's fieldworkers place emphasis on archaeological survey—locating sites over the changing landscape, combined with very limited excavation that often involves statistical sampling.

High technology science now plays an important role in archaeology. Aerial photography, subsurface radar, Geographic Information Systems (GIS), even satellite imagery, are part of our research armory. Radiocarbon dating, developed in the late 1940s, has achieved a high level of refinement, with the ability to date organic objects as small as an individual seed, and calibration tables that relate radiocarbon years to dates in calendar years.

We are now beginning to acquire a much more accurate chronology for early Alaskan history, based on a rapidly growing number of radiocarbon samples. Science has also revolutionized the study of artifacts and food remains. We can now trace the sources of some toolmaking stones, like obsidian (volcanic glass), and use carbon isotope analysis to determine whether an individual ate mainly plant foods or fish or depended mainly on maritime or terrestrial resources—to mention only two recent triumphs of archaeological detective work.

Perhaps the greatest revolution of all has come in the study of ancient climate change and environments. Thanks to ice cores drilled in the Greenland ice cap, to sophisticated geomorphological research on Alaska's coastlines, and to all kinds of specialized inquiries into such esoterica as sand dunes, lake core sediments, and fossil pollens, we are acquiring a much more precise knowledge of the profound environmental changes that have occurred in southern Alaska over the 15,000 years since the Ice Age. We cannot hope to understand the human societies of these millennia without unraveling the dynamics of their ever-changing world.

For all these innovations and fieldwork, archaeological research in Lake Clark has hardly begun. All we can do is reconstruct a story from shreds and patches of excavation and survey within the boundaries of the Park, and extrapolate from the experience of other ancient groups who visited its coast and hunted there.

2

The First Settlers

It is late spring 15,000 years ago, between Siberia and Alaska. The relentless, dry north wind blows across the low-lying plain, bringing savage gusts. Huge clouds of dust billow across the treeless landscape. The vast bowl of blue sky overhead pales gray with the cascading grit. An opaque haze masks the horizon. Even at midday, it's hard to see where heaven and earth meet. The gently undulating plain seems endless, extending to the far distance and beyond.

A tiny band of fur-clad humans plods along slowly in the gloom, their backs to the wind, huddled in their parkas and carefully tailored clothes. Their journey is a short one across the featureless steppe, from one shallow river valley to another, toward the sunrise. No one can see more than a short distance in the gloom, but the hunters pick their way through the shrub and sand with unhesitating ease. They know the subtle landmarks of the environment—distinctive bushes, the patterns blown in the scrub by the wind, sand dunes that offer brief shelter for a rest. The people have passed this way before, following the small herds of caribou and other game that take shelter near the few rivers that bisect their desolate homeland. Once in the shelter of the valley, they'll camp and stalk their prey in the grasslands near river and stream.

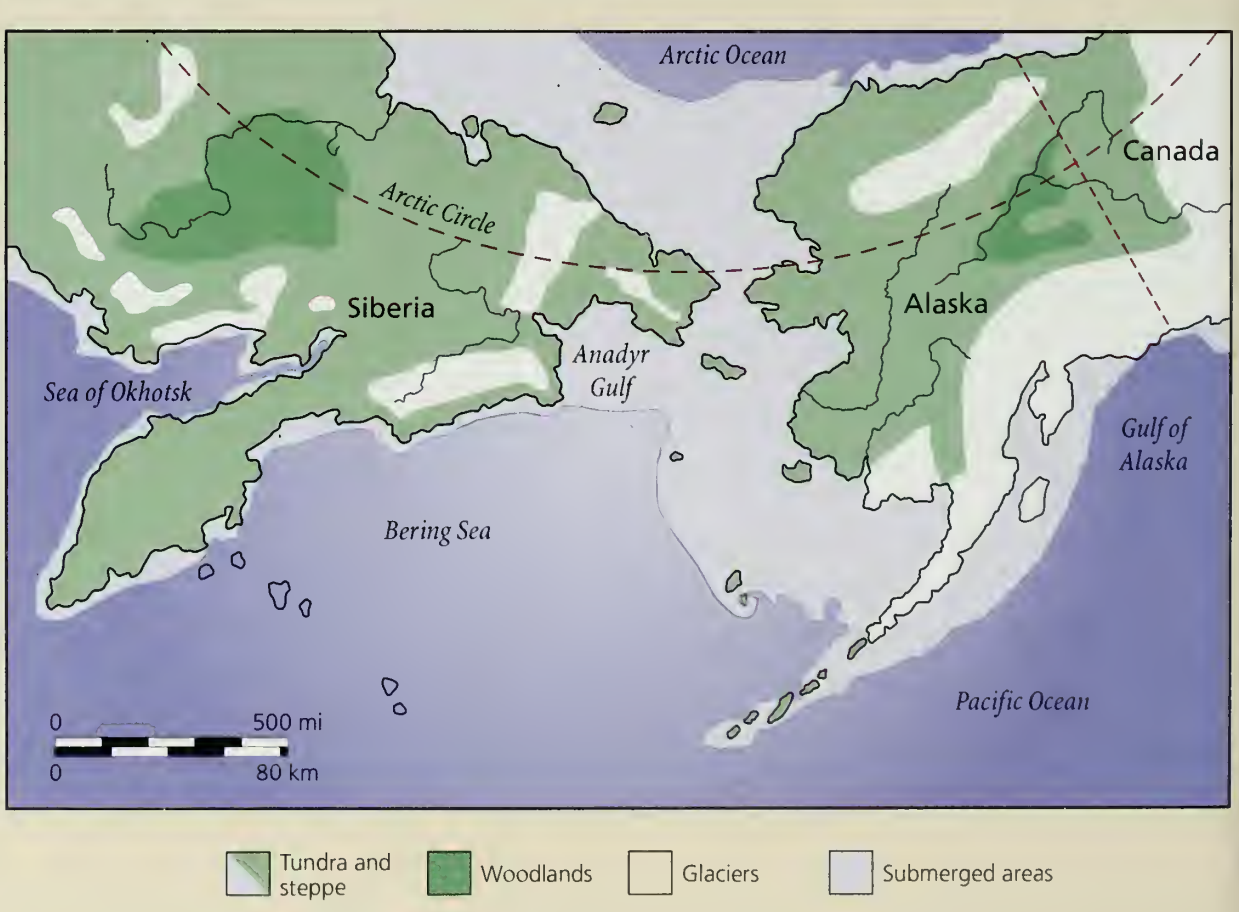
The band comprises no more than one or two families, who spend much of the year on the move. During the cold months, they occupy winter camps of squat sod and mammoth bone houses dug into the permafrost. Winters here last nine months a year with weeks of sub-zero temperatures, but the people are used to such conditions. Thanks to their layered clothing, they can hunt and work outside in bitter cold as long as there is daylight or a moon. During the long months of darkness, they remain inside for the most part, huddled close to their hearths, spending long hours under thick furs and hides. During these times the shaman chants and sings songs, telling stories of mythic beasts and ancestral spirits, the powerful forces that define the harsh world where they live.

Come spring and longer days, the band emerges from the near-hibernation of winter and moves out in search of game and the few plant foods that appear during the brief growing season. This is the only time they come in touch with others, share intelligence about game and water supplies, collect stone for making tools (an impossible task in winter), and make contact with kin from other bands. Life is never easy. The composition of the bands changes constantly. Perhaps a hunting accident

kills the men, so the women join their neighbors. Perhaps a bitter quarrel causes a family to move away, or an adult son leaves his parents to find new hunting grounds. The bands come together and merge in an endless pattern of expansion and contraction, movement from one valley to the next, covering enormous amounts of ground, for the land with its scanty food supplies can support very few people indeed. The movements of game and the seasons of plant foods define life. So does intelligence shared with others, and highly flexible territorial boundaries. Few people encounter more than thirty other folk in their entire lifetimes .... These shadowy Late Ice Age people of about 15,000 years ago were the first Americans.

First Settlement: By Land or Water?

Fifteen thousand years ago, North America was unimaginably different from today. Huge ice sheets masked the Rocky Mountains and covered almost all of Canada. Alaska and parts of the Yukon were unglaciated, but sea levels were about 300 feet (91 m) lower than today. A low-lying, bitterly cold land bridge linked Siberia and Alaska by at least 100,000 years ago, making Alaska essentially an extension of Siberia. The Bering Strait was the heart of a now-partially inundated northern continent, known to geologists as Beringia, named, like the Strait, after the Russian Explorer Vitus Bering, who sailed into the waters between Siberia and Alaska in 1741. For almost 100,000 years, people could walk from Siberia to Alaska without getting their feet wet.



2.1 The Bering Land Bridge, 100,000 to 15,000 years ago.

Most people agree that the ancestry of the Native Americans lies in Northeast Asia and that the first Americans arrived in what was then an uninhabited continent from Siberia. The scientific evidence for this ancestry is compelling—similarities in teeth patterns, linguistic relationships, and, above all, genetics.

Mitochondrial DNA (MtDNA), which you inherit through your mother's line, is proving to be a remarkably effective way of monitoring human ancestries thousands of years into the remote past. In recent years, molecular geneticists have traced the origins of *Homo sapiens*, modern humans like ourselves, back to ancestral African populations between 150,000 and 200,000 years ago. MtDNA not only points to Siberia as the origin place, but also shows that the first people to move across the Strait paused for some time in Beringia, time enough to diversify genetically from a common ancestor they held with the Siberians.

The notion that the first Americans stayed for some time in Beringia before moving southward is a new one, based on very recent genetic research, but it certainly seems to fit what we know about the dynamics of hunter-gatherer life. For generations, archaeologists assumed that the first settlers colonized extreme northeastern Siberia, then moved rapidly across the Land Bridge into Alaska. This scenario derives in part from the penchant that scholars have for drawing migration lines on maps, as if ancient peoples followed well-defined routes like interstate highways. Wrong! It was never a matter of some Siberians, or people on the Land Bridge for that matter, getting up one day and saying, "Let's go to Alaska." Entirely different realities, such as game movements, defined their lives. Many bands thrived within the same Beringian territory for hundreds, if not thousands, of years. By the same token, some of them, probably on many occasions, walked onto the higher ground on the Alaskan side of what is now the Bering Strait, fished, hunted some animals, gathered some plants, camped for a while, then returned to the west, perhaps even as far as Siberia.

The first people to colonize Alaska and North America did so as part of the primordial dynamics of hunter-gatherer life, honed by thousands of years of experience in arctic environments. And, eventually, a tiny number of them established themselves on the Alaskan side, which became the focus of their hunting territories. They became the first Americans, but never knew it.

Did the first Americans arrive by land or by sea? Most experts believe that the primordial settlers crossed from Siberia on the Land Bridge, subsisting off land mammals like their relatives in Northeast Asia. Nevertheless, some archaeologists argue for a crossing by boat. They hypothesize that small numbers of immigrants skirted the windy, ice-strewn Beringian coast in what would have been skin boats. (The environment was treeless, so their boat frames would presumably have come from precious driftwood.) Such people were not terrestrial big-game hunters, goes the argument, but maritime folk who subsisted off fish and sea mammals close inshore. This hypothesis is an intriguing one, but impossible to document, as any relevant archaeological sites lie far below modern sea level. And even if we did locate such settlements, the preservation would have to be truly exceptional to preserve the driftwood, bone, and hide of ancient watercraft.

There are also important theoretical difficulties, notably the hazards of navigating in skin boats among ice floes, and the ever-constant danger of hypothermia in waters where the survival time is minutes rather than hours. I believe that the first settlers may have been familiar with the technology of skin boats, but that the sheer severity of their Late Ice Age environment made exploitation of the ocean and travel on it virtually impossible.

When Was First Settlement?

When did humans first colonize Alaska? The chronology is still subjective and controversial. There are still a few archaeologists who claim that colonization of the Americas took place as early as 40,000 years ago, but they have no convincing grounds for stating this. The problem is that the first Americans were constantly on the move, used highly portable toolkits, much of which were perishable, and rarely lived in any settlement for longer than a winter. They left almost no archaeological "signature" behind them. One Canadian archaeologist has aptly described the search for the first Americans as a quest for a needle in a haystack, and a frozen one at that.

The Bering Land Bridge finally vanished in about 8000 B.C., although 386 square miles (1,000 sq. km) of the original scrub landscape survived under a layer of thick volcanic ash on the Alaskan side. It was a low-lying, windy place, with long winters and short, humid summers. Grasses, shrubs, and sedges dominated the unstable ground cover that grew on very thin soils. The same game animals thrived here as in Siberia—mammoth, musk ox, steppe bison, and the gregarious saiga antelope. The greatest density of game was in the shallow river valleys that bisected the plain, but even there animals were far from plentiful, and the human populations that exploited them and the plant foods that grew in the brief summer were small. This may be one reason why it took several thousand years for people to move to the Alaskan side on a more permanent basis.

The archaeology of northeastern Siberia is very incompletely known, but there seems to have been at least transitory human settlement there by about 27,000 years ago, at a place called Yana near Berelykh in northeastern Siberia. At that time, the climate may have been somewhat warmer than it was during the bitter cold of the last glacial cold snap of 18,000 years ago, when the entire region may have been abandoned by humans and animals alike. The earliest well-documented human settlement comes from after 18,000 years ago, about the time when people are thought to have first settled on the Bering Land Bridge.

We know almost nothing about these early Siberians except for their stone tool technology,

2.2 Microblade technology: A microblade core, microblades, and slotted point and inset microblades from the Rice Ridge site, Kodiak Island, made of red and gray chert and sea-mammal bone, respectively.

PHOTOGRAPH BY SVEN HAAKANSON JR. ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY RICE FAMILY COLLECTION

which was based on stone spear points and the fabrication of tiny, thin blades, produced from carefully molded wedge-shaped cores of chert, flint, and other fine-toolmaking stone. These small artifacts were designed to be mounted in spear points, and much later in arrows, to make them truly lethal against bison and caribou. The technology is thought to have originated in northern China during the coldest millennia of the Late Ice Age around 20,000 years ago, then to have spread north as climatic conditions became warmer, to come into widespread use in northeastern Siberia. Interestingly, microblade technology is characteristic of many of the earliest archaeological sites in Alaska, where this simple but efficient technology remained in use in some places until as late as 3,500 years ago, perhaps even later. This strongly suggests that the first colonists were terrestrial hunter-gatherers, who used light, highly portable weaponry against caribou and other land-based animals.

There seems to be widespread, if often tacit, agreement that people were well established on the Bering Land Bridge by 15,000 years ago, perhaps earlier. But the earliest archaeological sites in Alaska, from the Tanana Valley southeast of Fairbanks, only date to about 11,700 B.C., by which time we know that humans were living as far south as northern Chile in South America. By this period, too, the well-known Clovis people, famous for their finely made stone projectile points, were well established far south of the retreating ice sheets. No question, there were earlier settlers in Alaska, but the traces of their passing are so inconspicuous that we have yet to locate them. Alaska is a huge, roadless place, and archaeologists have only studied a fraction of it.

2.3 A range of exceptionally fine Clovis points from Washington State. WARREN MORGAN CORBIS

2.4 Hypothetical routes taken by the first Americans.

Routes Southward

Some of the most vigorous debates about the first Americans surround another fundamental question, which is of direct relevance to the history of Lake Clark. When, and by what route, did the first groups move southward into the heart of North America? If MtDNA genetics are to be believed, they apparently did so very rapidly.

For generations, archaeologists believed that the initial settlers moved southward from Alaska through northern Canada down a narrow, ice-free corridor that opened up as the two great ice sheets that mantled the North melted rapidly and parted. The so-called Cordilleran ice sheet covered the Rockies, the Laurentide the areas to the east. However, recent geological research has shown that an ice-free corridor never existed between the two retreating ice sheets. Most archaeologists now wonder if first settlement was along the coast at a time of much lower sea levels and extensive coastal plains now covered by up to 300 feet (91 m) of the Pacific.

For years, too, archaeologists assumed that the primordial Native Americans were big-game hunters, who thrived by pursuing now-extinct large Ice Age animals like the mammoth. Such animals rapidly vanished throughout the Americas by 10,900 B.C., probably as a result of rapid climate change, but perhaps helped by some local overhunting. In fact, we now know that the first settlers were extremely versatile hunters and foragers, who relied on a broad range of animals, plants, fish, and sea mammals for their diet. The emphasis of the food quest changed from one area to another, but a very generalized diet, and brilliant qualities of adaptability and opportunism, allowed the first settlers to adapt to a remarkable diversity of coastal and interior environments such as developed along the Pacific coast through South and Southeast Alaska, perhaps as early as 11,000 B.C., but this date is merely an intelligent guess.

Once the great thaw at the end of the Ice Age began, after 15,000 years ago, sea levels rose

irregularly and sea ice conditions became more favorable during the summer. But the Pacific did not reach near-modern levels for thousands of years, so there were extensive tracts of continental shelf exposed along the coastline. We do not know much about these environments, but it seems likely that they supported the same steppe-tundra vegetation that still flourished on the rapidly vanishing land bridge. Such low-lying, swampy environments would have attracted people moving southward, again as part of the normal dynamics of hunter-gatherer life, coastal areas where caribou and other familiar animals were to be found. Here, too, fish and sea mammals would have thrived. At least some of the first settlers along the coast must have lived at least partially off marine life. But, despite these favored places, the land could normally only support very small numbers of people, so human population densities must have remained low. They did not rise significantly until intensive exploitation of the maritime environment began (see Chapters 3 and 4).

I believe that the first human settlement of southern Alaska took hold along the coast. Judging from the few artifact finds, this settlement was probably by terrestrial hunter-gatherers rather than maritime groups.

2.5 Early settlement in the Park: An area of knolls near Twin Lakes where a scatter of stone debris has been dated to about 10,000 years ago. PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE.

Paleoarctic Peoples: First Settlement in Southern Alaska

We do not know when the first human settlers reached the Cook Inlet, but it could have been very early, for Lake Clark was clear of ice sheets by 12,000 B.C. The first settlers probably arrived some time afterward, entering a tundra landscape while pursuing caribou. They appear to have brought microblade technology with them, using fine quality chert from sources outside the Park, obtained either by exchange or in the course of moving over large hunting territories. Almost no traces of the newcomers survive in the Park, nor of later groups who lived there after 6500 B.C., who apparently made less use of exotic toolmaking stone obtained from afar, perhaps a reflection of less mobility or fewer contacts with others.

We know almost nothing about early settlement along the coast. The earliest well-dated location is known as Ground Hog 2, a site in Icy Strait near Glacier Bay occupied in about 8000 B.C., some 700 miles (1,126 km) east of Cook Inlet in northern Southeast Alaska.

On-Your-Knees Cave on Prince of Wales Island near Ketchikan, even further away in southern Southeast Alaska, has yielded a barbed harpoon of a type that could be used for hunting sea mammals, and the remains of a man in his twenties who died before 7200 B.C. Hi-tech science, especially the analysis of bone isotopes, can tell us much of ancient peoples' diets. The individual's remains, tested with the permission of the local Tlingit tribal authorities, showed that he lived almost entirely off marine foods. After testing, the U.S. Forest Service returned the remains to the Tlingit for reburial. According to the Sealaska Heritage Institute, the local people interpreted the testing as an instance in which an ancestor offered himself up for knowledge and learning. Tribal elders saw this as a way to validate their ancient presence in Southeast Alaska.

These and other isolated finds, often little more than small stone artifact scatters, belong in what archaeologists call the "Paleoarctic Tradition," which flourished between about 8000 and 5500 B.C.—the first, and virtually undocumented, chapter of Lake Clark's human history. The technology is distinctive, tiny "microblades," struck off wedge-shaped pieces of fine-grained toolmaking stone such as chert. These artifacts were inset into the sides of sharp bone points, which were highly effective against game like caribou. Fortunately, these tools are distinctive enough to be identifiable even from small samples. As a result, we know that microblades occur over an enormous area of what is now Alaska, from the Bering Strait to the Southeast. They are also found in northern and western Canada. The same bands also made use of multipurpose artifacts flaked on both sides: bifaces.

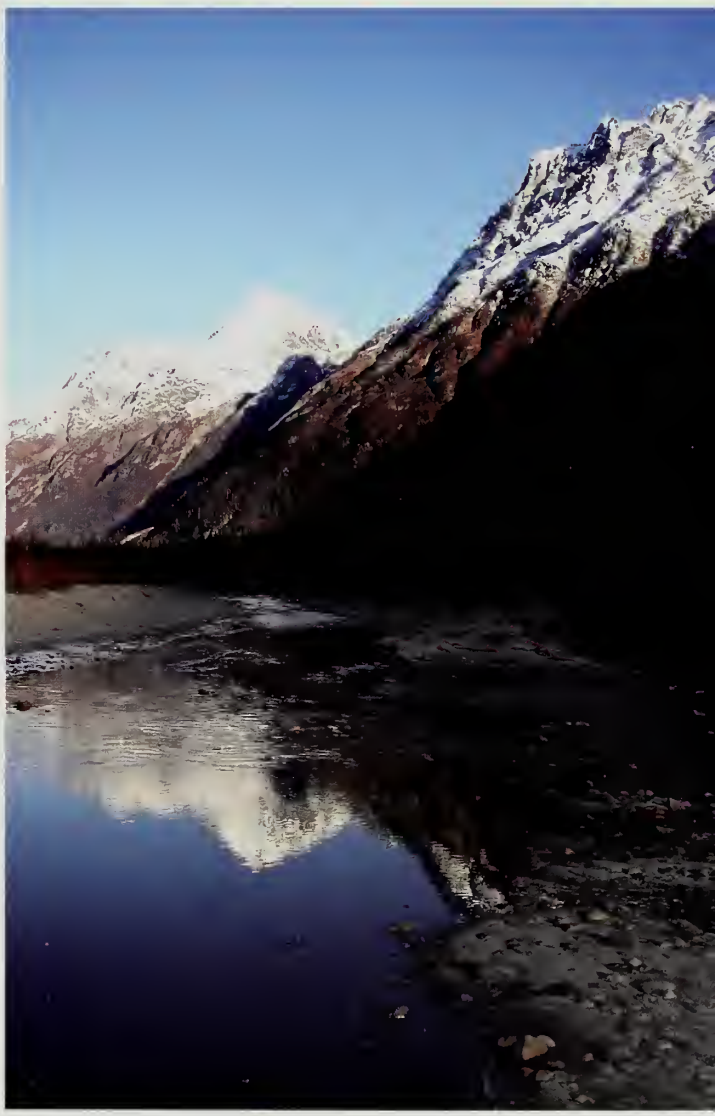
The first human artifacts used along the coast have a deep pedigree in the Ice Age. They were tools associated with land-based hunting.

Only a few Paleoarctic sites occur on the Pacific coastline, most of them from places where the ocean is not far away, including the Alaska Peninsula. A site on the narrows between the Lower and Upper Ugashik Lakes, excavated by Don Dumond of the University of Oregon in 1974, yielded charcoal and microblades radiocarbon dated to at least 7000 B.C. Another scatter at Graveyard Point at the mouth of the Kvichak River, also found by Dumond, dates to just after 7000 B.C. Significantly, Ugashik Narrows was, and still is, an active crossing for land animals, including caribou. Graveyard Point may have been the same. For the next 4,000 years, an increasing diversity of groups hunted caribou and other animals in the region, identified by different toolmaking traditions, some of which blend one into the other.

It is a spring caribou hunt near the coast 9,000 years ago. Several families have camped behind a ridge overlooking a strategic caribou crossing by a glacial lake. They watch patiently as the caribou show signs of approaching the crossing point. At dawn, the hunters move out and hide among the boulders. They cover themselves with dead grass, at a place where the caribou have migrated during the lengthening days of spring since time immemorial. They lie in hiding downwind, scanning the still snow-covered tundra for their prey. The caribou nuzzle through the shallow drifts for new growth, moving gradually toward the narrow defile, where a stream flows into a nearby lake. This is the only place where they can cross to the summer pastures on the other side. A trickle of beasts moves past the waiting men, but they hold off, watching for the solid mass of caribou now heading toward the ford.

Now the leaders are on the other bank and their followers crowd into the shallows. At a quiet signal, the men leap to their feet and rise from the ground almost in the midst of the herd. Razor-sharp spears rise and fall as the hunters move among the terrified beasts, leaping to avoid slashing antlers, almost jumping on the backs of the crowded herd. One of the men falls with a cry, gouged by a vicious antler. Blood cascades from his shoulder as he tries vainly to stand up. The hunt lasts only a few minutes. The herd stampedes to safety on the other bank, leaving a carpet of dead and wounded beasts in its train. Now the hunters move quickly, dispatching injured animals struggling to escape and pursuing straggling, bleeding members of the fleeing herd. As the hunt ends, the women and children arrive from the nearby camp with sharp knives. By the end of the day, the caribou are butchered and their flesh dries in the cold wind....

Can we assume that the Paleoarctic Tradition was entirely made up of people living in the interior? Certainly not, for the modern-day coastline is deceptive. Hundreds, if not thousands, of archaeological sites may lie below modern sea level, having been destroyed or made effectively inaccessible to modern researchers. Thus, we have no means of knowing just how early coastal settlement truly was, or when it began. All we can do is chronicle the increasing use of the coast by later groups, an issue of direct relevance to the later occupation of the Lake Clark region, described in the next chapter.



COURTESY OF THE NATIONAL PARK SERVICE

3

Exploiting the Shore

It is summer, c. 5500 B.C., off Kodiak Island. The two open skin boats huddle close together as they head offshore in the calm of the morning across what is now known as the Shelikof Strait. A small crowd silently watches them, for this is the first time anyone has tried to reach the low island that hovers on the distant horizon. The southerly wind is soft and warm; the sea is like a mirror, ideal conditions for a long passage over open water. Generations of hard-won expertise, passed from elder to elder, have gone into the decision to sail today. Faint sounds of a paddling song echo back to shore as the sturdy craft head into deep water, away from the shelter of the land.

Hours later, the paddlers still work the boat at a steady pace they have kept up for hours. A boy crouches in the bottom of each boat, baling water as it seeps through the sewn seams. The head wind has strengthened slightly, but the skippers are heading to the right of their course to allow for the rapidly flooding tide that pushes them sideways. Both men watch the approaching shore, looking for a sheltered beach where they can land safely. They feel more confident now, for they know they'll reach land before the brief hours of darkness . . . .

Early Maritime Settlement

Kodiak is an archipelago where fish, mollusks, and sea mammals thrive, also numerous marine birds and waterfowl, but where land animals are scarce compared to the mainland. Plant foods also abound and are the subject of an extensive plant lore. Those who colonized the islands in about 5500 B.C. or earlier had to be expert at catching such prey, separated as Kodiak was from the mainland by nearly 19 miles (30 km) of usually rough and often-stormy water. At first, settlement must have been tentative, even with numerous food resources, so there must have been relatively frequent contacts with home communities for social and spiritual purposes. Within a short period of time, however, the islanders could stand on their own feet and flourish in isolation.

This was when gradually intensifying exploitation of the marine environment began. There had long been some fishing and sea-mammal hunting. The people living on the Aleutian Islands further to the west had relied on the Pacific to the virtual exclusion of terrestrial resources for many centuries, since at least 7000 B.C. The human settlers of the mainland in earlier times were predominantly land-based hunters, subsisting off caribou, moose, and other game, also fish and plant foods. The population of the entire Cook Inlet area cannot have numbered more than a few hundred people at the most, and many areas, especially the exposed western shores of the Outer Inlet, must have been virtually devoid of human settlement for thousands of years.

3.1 The Alaska Peninsula and Shelikof Strait, seen from Karluk Lagoon, Kodiak Island.
COURTESY OF PATRICK SALTONSTALL, ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY

We know little of the early history of maritime societies along the shores of the Lake Clark Park, if indeed there were any at all along a shore where tides ran strongly. The history of the period between about 5500 and 1500 B.C. comes from coastal excavations on the Pacific shore of the Alaska Peninsula, on Mink Island off the mainland, from Kodiak Island, and on the eastern shore of Cook Inlet, especially from Kachemak Bay, opposite the Lake Clark Park coastline. A solitary date from a site on Magnetic Island of c. 1500 B.C. is the only evidence of early human occupation on the west side.

Sea-Lion Hunters on Mink Island

Long sequences of human occupation, in which people returned again and again to the same location, are rare on the Alaska Peninsula. One such sequence comes from a site close offshore where hunters exploited Stellar sea-lion rookeries for thousands of years.

Mink Island lies in Amalik Bay off the Alaska Peninsula, in the Katmai National Park and Preserve. The island is part of the Takli group, which probably formed a single land mass until about 5000 B.C. Unfortunately, rising sea levels, storm waves, tsunamis, and volcanic activity have removed much of the archaeological deposits, but enough remained from 1996 to 2000 for a National Park Service team headed by Jeanne Schaaf to excavate a 10 by 20 foot (3 by 6 m) block in an eroding midden.

The meticulous dig unearthed a stone lamp sitting on two large basalt blades and decomposed mussel shell in an ocher-stained pit. Charcoal scraped from the lamp dates to 5600 B.C. This and a similar lamp from Kodiak Island are the two earliest such artifacts known in North America. An ocher-covered shelter floor, dated to 5200 B.C., covered the pit. Microblades, ocher grinders, and toolmaking debris, also a bifacially chipped spear

3.2 Mink Island. PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE.

point, lay on the floor. This occupation is contemporary with settlements known from Ocean Bay on Kodiak Island.

In about 4600 B.C., a volcanic eruption deposited white ash on the island. Within a few years, sea-lion hunters returned to the island, leaving spear points and large blade tools behind them. Six hundred years later, during a warmer climatic interval, visitors to Mink constructed a house of driftwood logs, heated by a pebble-filled hearth. The dwelling remained in use for several winters. Most of the house had eroded away, but the excavators recovered stone lamps and numerous microblades from multiple occupation levels.

In about 3400 B.C., a temporary shelter in the form of an oval-shaped depression with an ocher-stained floor, covered by pole-supported hides, occupied the same spot. Red ocher was probably used to tan hides for bedding or tent coverings. In later times, it was also the material of choice

3.3 Red-ocher-covered floor of a small, temporary shelter occupied in about 3,400 B.C. from Mink Island. The floor, well preserved under volcanic ash, was a shallow oval depression that was once covered with an ocher-stained hide. Traces of activities such as ocher grinding, stone tool manufacture, and bone needle production came to light on the floor.
PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE

for facial painting and other such activities. Fortunately for Schaaf and her colleagues, volcanic ash sealed the floor soon after its abandonment, preserving areas where people ground ocher, made bone needles, and fabricated stone tools. Sea-lion bones were numerous, for the inhabitants exploited the same Stellar sea-lion rookeries, only three miles (4.8 km) from the site.

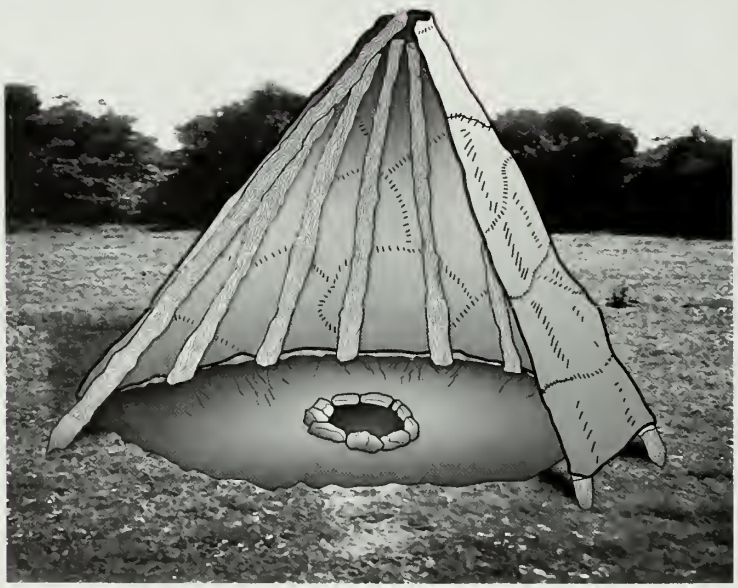
Mink Island chronicles sea-lion hunting just off the mainland over a little known period of 2,000 years.

Ocean Bay

The notorious "skull doctor," Ales Hrdlicka, was the first to hear of a "whaling site on the south shore of [Sitkalidak Island] . . . in Ocean Bay" in 1931. This was probably a late site, perhaps even from historic times. Thirty-two years later, archaeologist Donald W. Clark of the University of Wisconsin located another settlement at Ocean Bay, exposed in a bulldozer cut made by a local rancher, which yielded artifacts quite unlike anything previously found on Kodiak Island. Small-scale excavations followed, hampered by bad weather, but sufficient finds came to light to identify an unknown cultural tradition with at least two phases, separated by different artifact forms. This soon became known as the "Ocean Bay Tradition," which dates to as early as 5500 B.C. on Kodiak Island and slightly earlier at one site on the mainland.

The first inhabitants of the bay camped in what had once been a protected bay that teemed with fish and sea mammals. Hunting and fishing parties camped on the surrounding hillsides over many centuries. At the same time, similar Ocean Bay artifacts appeared on the Alaska Peninsula, on Mink Island close offshore, and in the Afognak River area of northern Kodiak.

Ocean Bay people also lived inland. The Pedro Bay site on the northeastern shore of Iliamna Lake was excavated by Joan Townsend between 1960 and 1969. She and her colleagues unearthed house depressions and pits that documented occupation going back to as early as about 2500 B.C.



3.4 Reconstruction of a tent-like dwelling from Brooks River on the Alaska Peninsula, c. 2500–1900 B.C. COURTESY OF DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF OREGON, EUGENE.

The occupants fashioned ground slate blades identical to some fashioned in the Brooks River area at the base of the Alaska Peninsula and in Takli Birch sites along the shores of the Shelikof Strait, dating to about the same time and later. Ground slate points from Ocean Bay sites on Kodiak Island and in Kachemak Bay are very similar to the Iliamna Lake specimens, prompting specialists to include them in an "Ocean Bay II" culture that flourished over a wide area after 2500 B.C.

3.5 The Kenai Peninsula and Kachemak Bay. PETER JOHNSON/CORBIS

The site lies at a strategic location, sheltered by Pedro Mountain from the prevailing westerly winds and storms that sweep across Iliamna Lake. For thousands of years, people traveled down the lake to Cook Inlet, which gave access to Kodiak Island. It's hardly surprising to find Ocean Bay occupation on Iliamna's shores by people who appear to have maintained connections with maritime groups around the Inlet, on the Alaska Peninsula, and on Kodiak Island. And it's no coincidence that the same location was used by later peoples with cultural connections to northern Alaska, and by the historic Dena'ina.

An early Ocean Bay settlement on Aurora Spit on Kachemak Bay on the Kenai Peninsula dates to about 6000 B.C., older than any such community on Kodiak Island. Later Ocean Bay occupation comes from Prince William Sound and Kachemak Bay, dating to about 2500 B.C., considerably later than the early sites at Ocean Bay and on the Alaska Peninsula. Kachemak Bay is about 39 miles (63 km) long and 24 miles (39 km) wide. The modern city of Homer lies by a spit of land that divides Kachemak Bay into an estuarine inner embayment and an oceanic outer bay. Like the Lake Clark Park shoreline, Kachemak Bay has a huge tidal range, up to 18 feet (5.5 m) at full moon. Numerous bays and streams break up the southern coast, whereas the north shore comprises tidal mudflats and cliffs. Almost all human settlement occurred on the convoluted southern shore, where there were numerous sheltered locations for human settlement and ice

conditions were more favorable compared with the northern side, with a freeze-over only once every ten years or so. Ice scoured the bottom, decimating mollusk beds and impeding fishing, both potentially disastrous happenings for the maritime communities there.

What attracted people to Kachemak Bay? While there were pink salmon runs in Kachemak, they paled into insignificance beside the bottom fishing in spring and summer, when cod, halibut, and flounder could be taken in large numbers. Blue mussels, clams, and other shellfish were plentiful, thanks to the extreme tidal range, while the bay was the most important waterfowl habitat in the Outer Cook Inlet. Many waterfowl wintered in the inner bay, while spring and fall migrants also stopped there. The nearby Inlet coast swarmed with sea mammals. Whales and fur seals migrated past the outer shore in summer. These were, however, hazardous waters for people in kayaks and open skin boats.

Ocean Bay sites everywhere provide abundant evidence of a true maritime adaptation. These people must have used skin boats in a basically treeless environment, where timber came mainly from driftwood. Indeed, Mink Island and locations on Kodiak that date to as early as 5500 B.C. could only have been settled by water. Excavations have revealed traces of circular rock rings that once anchored skin tents, as well as the small postholes used to set tent frames. Thin layers of occupation debris lie inside the circles. Most such locations were seasonal camps, used for a few weeks, perhaps months, then abandoned. But the people returned to the same places year after year, to temporary dwellings that were no more than 13–26 feet (4–8 m) in diameter, large enough for small nuclear families. The family slept around a central hearth. Many of the dwellings contain layers of red ocher, as well as the mortars and grinding stones used for processing the natural hematite.

Many camps lay in places where sea mammals were plentiful and ocean fish like halibut could be taken in abundance. Riverside settlements took advantage of salmon runs. Shellfish were also a useful food source. Hunting on the open ocean had long been under way, using increasingly sophisticated technologies. Early Ocean Bay sites, such as that on Mink Island, contain microblades like those used in earlier times, which were mounted along the edges of thin bone points to make lethal harpoons. The hunters also used heavier, flaked stone-tipped spears to pursue sea mammals. They combined these weapons with wooden throwing boards with hooks that enabled them to propel a spear over longer distances and with much enhanced velocity.

The people fished close inshore and in deeper water, using bone hooks. During the summer months, many of them spent more time afloat than on land. Everyone needed waterproof raiment for use afloat and ashore. Such garments were essential, for the increased emphasis on sea-mammal hunting and ocean fishing meant that the men spent long hours in their boats, often in rough water. Fine bone needles came to light at the Rice Ridge site on Kodiak Island, also at Mink Island, sewing implements so delicate that they could be used to fabricate waterproof outer garments from seal gut. Such garments were commonplace throughout the Bering Strait and Aleutian Island regions for thousands of years.

The woman sits on a convenient rock close to her summer tent, with a pile of seal gut by her side. Her thirteen-year-old son stands nearby, arms outstretched, standing stiffly upright. His mother uses a length of sinew to measure the length of his arms, the width of his shoulders, the circumference of his chest. Then she lays out lengths of gut on a flat stone and cuts the rough shape of a waterproof parka from the fragments. She winds a length of fine sinew around a bone needle, then sews the arm seams on one side. Her son is soon bored and fashions a wooden paddle blade as he waits

3.6 Maritime technology: An Aleutian hunter paddles his kayak by a seal rookery off the coast of St. Paul. He is wearing a seal gut waterproof parka and birchwood helmet. ALASKA STATE MUSEUM, LOUIS CHORIS COLLECTION. ASL_P139_48.

for the next fitting. With unhesitating skill, the woman deftly shapes the parka with needle and thread until her son can put it on. She commands him sharply to stand still as she tweaks the fit, using thorns and slivers of bone to tack edges and fit the arms and armpits before the final sewing begins. Hours later, she sends her son on his way proudly wearing his latest waterproof parka. The next day, his father will take him seal hunting alone in his own kayak for the first time . . . .

In about 3500 B.C., another change in local technology occurred with the widespread use of ground slate tools for the first time. Although such artifacts had been used in earlier times, it was not until now that long, slender spear points and flensing knives used for butchering sea mammals became commonplace. The technology involved cutting long grooves in slate with tough, sharp-edged stone flakes, before snapping along the grooves to produce long, thin blanks. Then the artisan ground the edges with a harder rock to shape a lance head and sharpen it. As far as is known, ground slate

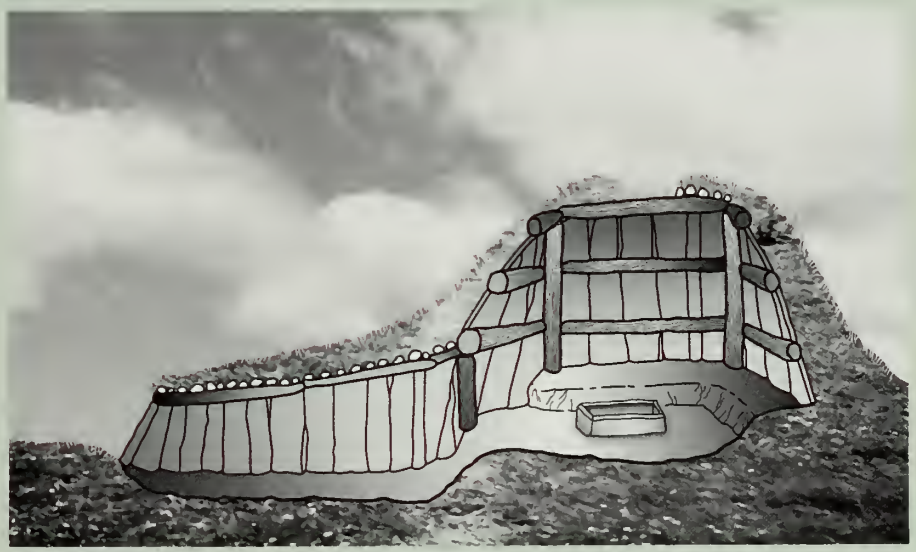
3.7 Ocean Bay Tradition slate lances. PHOTOGRAPH BY SVEN HAAKANSON, JR. ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY, RICE FAMILY COLLECTION, RICE RIDGE AND KODIAK ISLAND BOROUGH COLLECTION, SALONIE MOUND.

technology first developed in southern Alaska at about this time, and did not take hold further north in the Bering Strait region until later.

There, quite different tool kits emphasized small points for spear or arrow heads. Alaskan archaeologists call these small, exquisitely shaped northern toolkits the "Arctic Small Tool Tradition." Traces of Arctic Small Tool technology occur as far south as Kachemak Bay, but its origins remain obscure, and may lie in Siberia.

The Kachemak Tradition

After 1500 B.C., the climate changed gradually to the modern pattern, where the weather was cooler and wetter. The Ocean Bay people responded by moving partially underground into semi-subterranean dwellings as early as 2500 B.C., although they had houses with walls of stacked-up sod in earlier centuries. They lived in shallow pits lined with wooden frames covered with sod, creating warm residences with timber, whale bone, and sod roofs. These permanent winter houses became larger over time, as people remained at the same location for many generations. The food quest required mobility, and temporary camps sat close to places where people could harvest salmon runs, raid sea-lion rookeries, or hunt migrating whales. By 2000 B.C., the islanders were processing fish in enormous quantities.



3.8 Kachemak Tradition house, with sod walls and earthen benches. This particular house has an entrance tunnel and a central hearth, also earthen sleeping benches. COURTESY OF DEPARTMENT OF ANTHROPOLOGY UNIVERSITY OF ALASKA, ANCHORAGE.

Between 1500 B.C. and A.D. 1100, larger coastal villages appeared on Kodiak Island, sometimes with as many as thirty sod dwellings or more. Ocean Bay and early Kachemak houses were round, with offset hearths, while those built after 500 B.C. were square, with central hearths. Around the fire lay clay-lined pits used for preparing food—rendering oil, butchering, and the fermentation of fish and meat—as well as for boiling water by dropping red-hot stones into the clay "container." No more than 269 to 376 square feet (25 to 35 sq. m) in area, many houses had sleeping platforms and entrance tunnels that trapped cold air before it could enter the central living area.

A more crowded landscape meant increased competition and more interaction with neighbors near and far. Kodiak Island archaeological sites of this time contain exotic materials brought from afar, including basalt, caribou antler, walrus ivory, and toolmaking stone from the mainland. Some of these imports were used to make basic artifacts such as spear heads and to fulfill fundamental needs. Others, especially complete artifacts and ornaments, were valued exotics, sometimes with great prestige value. The volume of trade grew during these centuries, bringing resources to different areas from all kinds of local environments.

These changes also coincided with an increased emphasis on kin ties and territorial affiliations. For the first time, sites in Kachemak Bay yielded distinctive labrets, an ornamental plug worn below the lower lip. Labret finds throughout southern Alaska seemed to reflect regional differences that corresponded with different trade networks. For example, labret styles on the Kenai Peninsula and northern Kodiak were closely similar and quite different from those used on the Pacific Coast of the Alaska Peninsula and southern Kodiak. Beads and pendants now became more common, perhaps as symbols of social ranking.

At the same time, the treatment of the dead became more elaborate. In the Yukon Island site in Kachemak Bay, Frederica de Laguna found a burial of a man lying with a child. He wore an elaborate clay mask and a gypsum labret. Two skulls lay by his head, their eye sockets filled with artificial bone eyes. Some of the Kachemak burials of this era on Kodiak Island lay in pits around the village, some lined with wood or slate slabs. These simple crypts were reopened to add additional burials, or to remove bones for ritual purposes. Everywhere the Kachemak Tradition flourished, only carefully selected individuals were dismembered, as if this practice were reserved for only a small segment of society. All of this suggests an increased emphasis on ancestors and links with revered ancestral kin. The later Kachemak dead sometimes lay with elaborately decorated stone lamps, at a time when even everyday artifacts like bone adzes and wedges were given exact symmetry and a fine finish. The increased mortuary activity may also reflect increased cultural stress, perhaps warfare, for there was a high incidence of infant mortality and signs of seasonal nutritional stress in burials of the day. The living had a complex relationship with their ancestors and perhaps their enemies. There are instances of artifacts made of human bone, of the careful curation of skulls, and of the drawing of [illegible] from the dead and other mutilations.

Lake Clark: The Remote Shore

But where do the fastnesses of the Lake Clark National Park fit into these developments? Because of the paucity of archaeological research in the area, except for some surveys and detailed investigations of the two painted rock shelters described in Chapters 5 and 6, the answer must be that we don't know. There are certainly no signs of the intensive occupation characteristic of Kodiak Island, or even of the relatively sparse population densities in Kachemak Bay on the other side of the Cook Inlet.

The southwestern shore of the Inlet appears to have been a remote, somewhat marginal area for the maritime groups that flourished on Kodiak, and, to some degree, on the Alaska Peninsula at the time. Frederica de Laguna found a few sites during a preliminary survey during the 1930s. She spent some time in Tuxedni Bay, where oil-bearing Tuxedni sandstone may have been a source for the bituminous coal labrets used by the people of Kachemak Bay. There was little game here, except for bears, but sea mammals were plentiful in an area where the tides ran strongly and southeasterly gales blew straight on to an exposed coast. It's hardly surprising that de Laguna and her few successors have found only a small number of sites in the bay and along adjacent coasts. This was certainly a place that maritime people would have visited rather than lived in for long periods of time. The environment was simply too exposed, perhaps mainly worth visiting when beluga whales were to be taken.

The only site located by de Laguna, apart from the Tuxedni rock shelter described in Chapter 5, was on a point just north of Grecian (or Crescent) River, on the north shore of Tuxedni Bay. A rocky island lies close off a point. Here, de Laguna excavated a house pit in sparse midden material. Her finds included a leaf-shaped green slate blade, a grinding stone, and some stone flakes. Unfortunately, much of the island has been washed away since its

3.9 Caribou herd in snow. COURTESY NATIONAL PARK SERVICE.

occupation, but it seems unlikely that people dwelt here for any length of time. The painted Clam Cove rock shelter in Chinitna Bay, described in Chapter 6, has also been radiocarbon dated to this period.

The centuries between 2500 B.C. and A.D. 1100 were of great historical importance, for it was during this period that the foundations of the elaborate Alutiiq maritime culture of later centuries were laid. This was the time when maritime hunting technologies achieved an increasing level of sophistication, when local societies developed the first signs of social ranking and a profound concern for ancestors. However, for all the elaboration of social organization and ritual life, the basic rhythms of daily life continued unchanged from thousands of years back into the remote past. For all the diverse, more sophisticated harpoon technology, established ways of hunting sea mammals and of fishing remained much the same over long periods of time, even if people moved constantly and different cultural traditions came and went. How important whaling was in earlier times is still uncertain, for few whale bones occur even in late Kachemak sites.

These were the centuries, too, when the spiritual underpinnings of maritime life became apparent, drawing on shamanistic traditions of storytelling and trances, also on the close, fluid relationships between human beings and their prey. The stories of Raven, of powerful spirits, of the creation of men and women, may have developed during this same period, innovations with ancient ties that are virtually undetected in archaeological sites, where usually only the material and durable survives. (Other anthropologists argue that Raven was a late introduction from Northwest Coast culture, brought north along far-reaching exchange networks in later centuries.) But much of the ritual associated with these long-established and burgeoning beliefs, creation stories, and mythic beings was known to but a few individuals, men and women believed to have supernatural powers, or remarkable hunting skills, such as the men who pursued whales from fragile kayaks and put their lives on the line whenever they approached their prey.

The southern Alaskan world of 3,000 years ago was increasingly crowded and increasingly competitive, a crucible of innovation, trade, and, increasingly, warfare. All of this unfolded in the midst of a vast and often hazardous maritime landscape, of which Lake Clark Park was a part, where distances were long, especially for people paddling kayaks and larger skin boats. Much of this world was still unknown—isolated, mysterious, perceived as the domain of spiritual beings, benevolent and malign. Shamans retreated to these remote places on solitary quests, where painted rock shelters lay and where elaborate whaling rituals unfolded, known only to a few. This was also the world of the Alutiiq people, described in Chapter 4.

4

The Alutiiqs

"To the north of the peninsula of Alaska lived a toyon [chief], whose daughter cohabited with a male of the canine species, by whom she had five children, three males and two females. The toyon, being displeased with this degenerate conduct of his daughter, took an opportunity, in the absence of her lover, of banishing her to an island in the neighborhood. The returning lover discovered the place of their exile and swam toward it, but drowned. Meanwhile, the now fully-grown whelps were so angry at the toyon that they tore him to bits. The mother, on the melancholy event, resolved to return [to] her native place, and gave free leave to her offspring to go wherever they chose .... Some went northward, while others, passing the peninsula of Alaska, took a southerly course, and arrived at the island of Cadiak [Kodiak], where they increased and multiplied, and were the founders of the present population."

Alutiiq people point out that there are many ways to interpret this story. To quote from the Alutiiq Museum's Web site: "It may be about banishment. Elders say that long ago, incestuous people were called dogs and were sometimes forced to leave a community. It may also be a story that an unfriendly neighbor told to explorers to make fun of ancestors. People from different areas often traded insults. Or maybe it's a story about a *sua*—the human spirit that lives in all things. This spirit looks like a person. It can leave its owner's body at any time and live on its own. We don't know the answer."

The Russian explorer Uri Lisianskii recorded this Alutiiq origin myth of a union between a dog and a woman—a "Dog Husband" legend common to many Arctic peoples, as if they have some remote memories of a common origin, even if the details vary from one group to the next. This is one of several myths that look to the north for Alutiiq origins. But things were more complicated than that.

In 1873, French linguist Alphonse Pinart recorded tales of an initial settlement on Kodiak. After a while, the settlers came in contact with Tlingit groups living elsewhere on the island, fought them, and then formed a lasting alliance. Both oral traditions and archaeological finds testify to sustained contacts between the Alutiiqs and the Tlingit in a cool, wet environment that was a permeable frontier between different groups who lived in varying degrees of amity and hostility. This was a volatile world, riven by factionalism, competition, and warfare as different groups competed for advantage.

Alutiiq origin stories and legends provide links to the ancestors and vividly remembered events like a fierce gale or a memorable battle. Myths venture to the beginnings of time and explain the mysteries of the cosmos. Origin stories revolve around the creation of human beings. In one story, quoted in the Preface, a raven descends from heaven at the same time as a bladder containing a man and a woman. The origin tales share many elements with those of other northern groups, but the story of how the first man and woman pushed the sides of their prison to create mountains is unique to the Alutiiqs. Such narratives also serve as warning that Alutiiq ancestry was complicated. Deciphering their origins still defies the best efforts of modern scholars.

The "Real People"

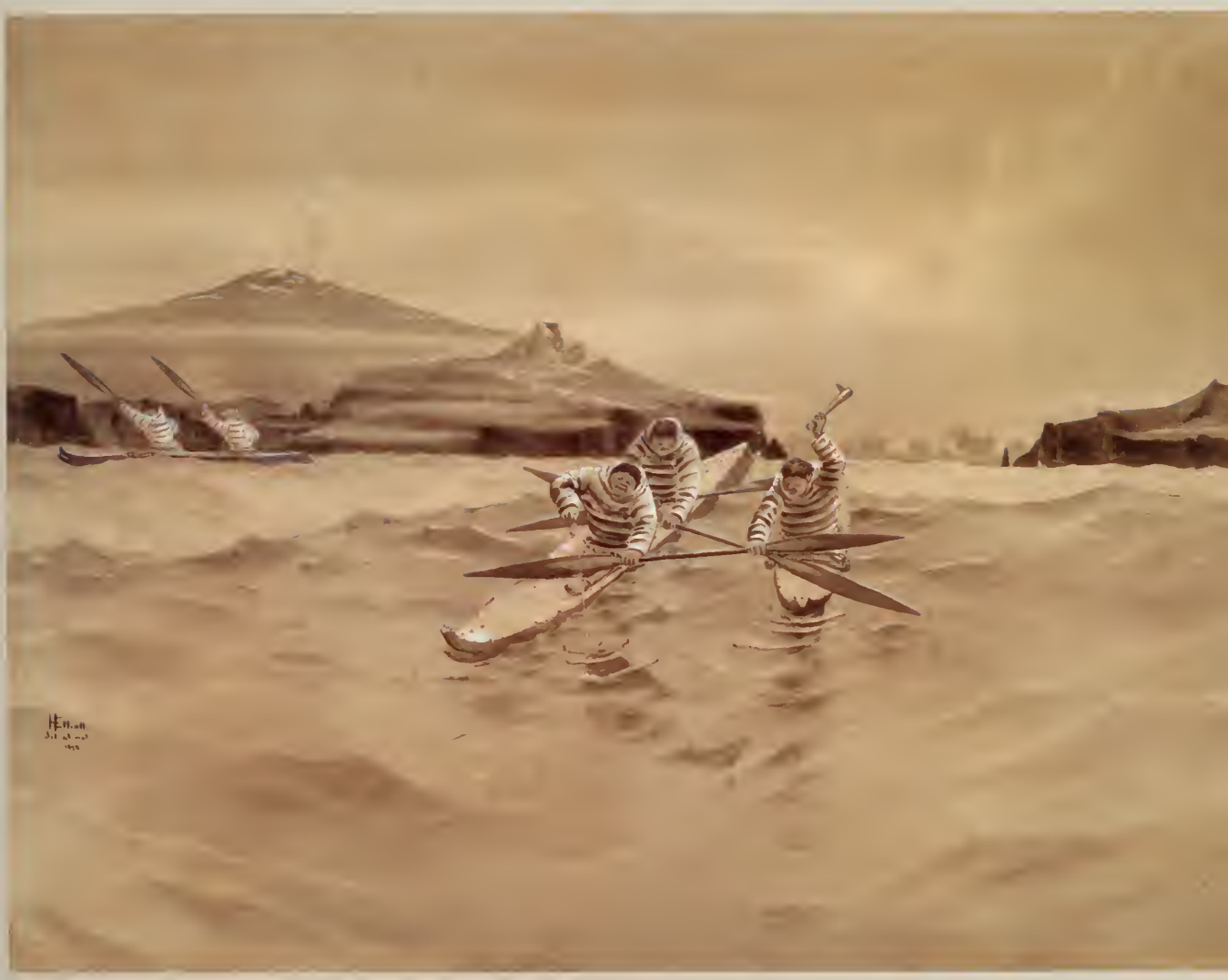
Everyone agrees that Alutiiq ancestry is a complex historical web, forged from centuries of population movements and cultural interchange between different groups. In general terms, their beginnings are closely tied to the Eskimo societies that extended over a vast area from northeastern Siberia across arctic Canada to Greenland and southward along the subarctic coasts of Alaska. Most anthropologists agree that Eskimo culture originated in Northeast Asia, and underwent a critical period of efflorescence and development in the Bering Strait region beginning some 2,000 years ago. There are six closely related languages used by the Eskimo: Alutiiq is one of them. The Alutiiq language (also called "Sugt'stun") is closely related to Central Alaska's Yup'ik, as if it were carried south in relatively recent times to the Gulf of Alaska coast, there to displace an earlier, unknown indigenous language. (It should be noted, however, that there is remarkable continuity from one century to the [illegible] those few archaeological sites that have [illegible] excavated.)

A high degree of genetic inheritance links different Eskimo groups, but Alutiiq relationships are more complex. They are genetically related not only to the Eskimo, but also to the Northwest Coast. They also share many common artifacts, art traditions, and spiritual beliefs with these groups.

The Alutiiqs shared a great deal with coastal Eskimo groups. They depended on sea mammals such as seals and whales, but they also took birds, fish, and plant foods. Like the Eskimo, their technology drew heavily on sea mammals—for hides, fat, and oil, the latter used for heat and light. Animal intestines provided waterproof clothing. Ground slate and flaked stone formed spear and harpoon points, enabling Alutiiq and Eskimo artisans to fashion an elaborate hunting technology from bone and ivory, sometimes lavishly carved. During the long winters, both the Alaskan Eskimo and the Alutiiqs dwelt in substantial houses made from stone, sod, wood, and whalebone, buried partially in the ground. Everything depended on seaworthy watercraft, capable of handling rough seas and strong winds. The ancestral Eskimo and the Alutiiqs were maritime people, who were as at home on the ocean as they were ashore.

No one knows where this maritime adaptation first developed, but it may have been in the Alutiiq homeland, where larger numbers of people lived in less harsh surroundings, with adaptations to sea ice hunting being added in the Bering Strait region some time later.

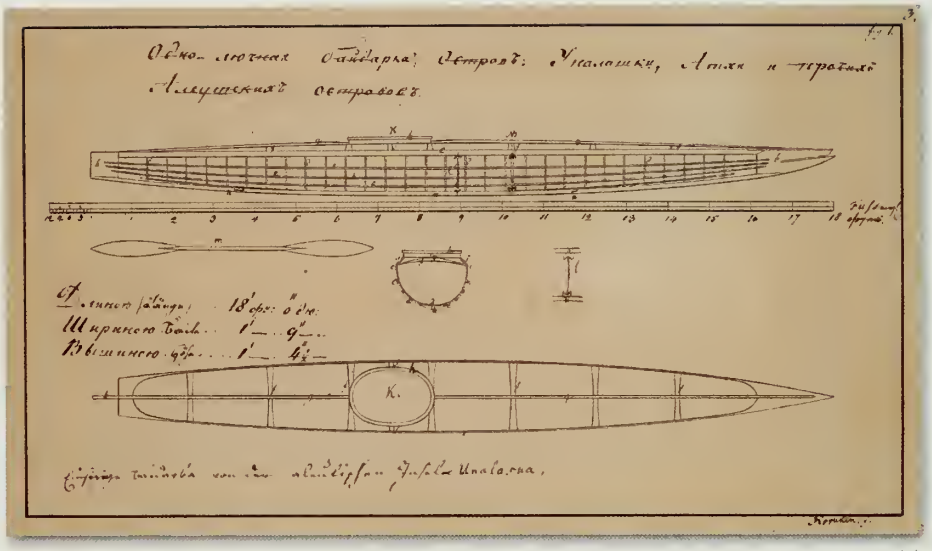
Many authorities believe that migrants from the Bering Strait arrived in the Alutiiq area around A.D. 1000, bringing an ancestral Yup'ik dialect with them. They may have brought some new artifact styles from the north with them, but archaeology tells us that a unique and distinctive maritime culture had already developed in the Alutiiq homeland. The evidence of lasting cultural continuity, of an Alutiiq ancestry deep in history, is so compelling that many Alutiiqs vehemently deny that they have any links to the Eskimo. They believe, with some



4.1 At home on the water: Fishing for halibut from kayaks. HENRY WOOD ELLIOTT 1972.
MS 7119, INV. 08594800, NATIONAL ANTHROPOLOGICAL ARCHIVES, SMITHSONIAN INSTITUTION

reason, that their culture developed independently in the Gulf of Alaska, ultimately from what archaeologists call the "Ocean Bay Tradition" and the "Kachemak Tradition," even if some technological innovations came from outside.

At European contact, the people called themselves "Sugpiat" (sing. "Sugpiaq"), meaning "real people." The Russians referred to them, as well as other indigenous peoples in the region, as "Aleuts." The Sugpat pronounced the word as "Alutiiq" (pl. "Alutiit") in their language. This is a commonly used cultural term today. By the eighteenth century, at least 8,000 Alutiiqs lived in small communities throughout the southern Alaska coast, most of them on Kodiak Island. Far fewer people dwelt along the shores of the Alaska Peninsula and what is now Lake Clark National Park. Russian visitors estimated that between 200 and 900 people lived on the Peninsula between 1792 and 1825, most of them living along river drainages where salmon were plentiful and in other bays where fish and sea mammals were plentiful. The closely related Chugach dwelt on the Kenai Peninsula on the east side of Cook Inlet and around Prince William Sound.



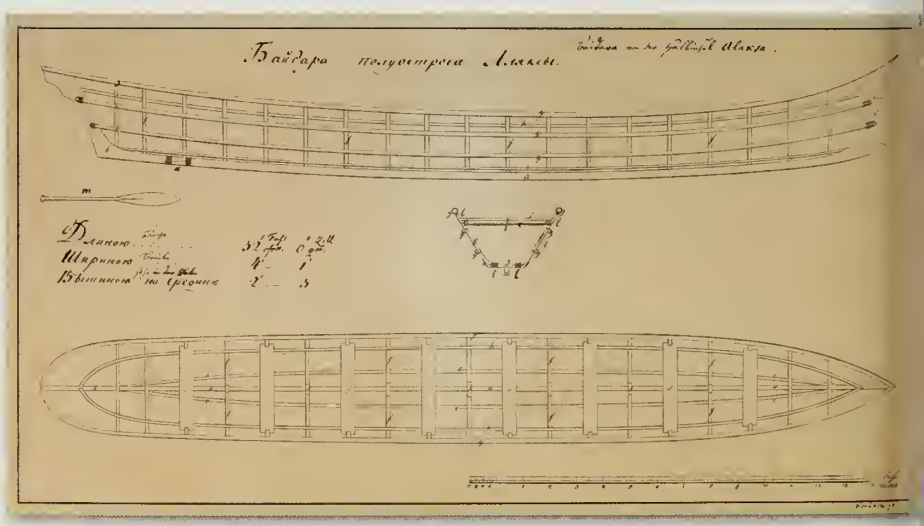
(a)

4.2 Plans of (a) a *baidarka* and (b) an *angyaq* from Kodiak Island by the Russian artist Korukin, 1803–1807.
COURTESY OF THE BANCROFT LIBRARY, UNIVERSITY OF CALIFORNIA, BERKELEY.

occupation mound that became waterlogged by nearby streams. The site is a treasure trove of organic finds, everything from wood, bark, and delicate fibers to fur, ivory, and human hair and feathers. From these remarkable excavations, we have a portrait of changing subsistence practices. For unknown reasons, the abundance of red salmon rose rapidly after 1,000 years ago compared with earlier Kachemak times. A growing reliance on fishing at the expense of sea-mammal hunting became apparent, as people developed storage chambers and containers for salmon

Reduced Mobility

By about A.D. 1100, the maritime societies of the islands and coast of southern Alaska, including Cook Inlet, began a process of transformation into the elaborate, socially stratified cultures encountered by Russian traders in the eighteenth century. The number of settlements increased dramatically, many of them to considerable size, with 200 houses or more.



Alutiiq life on Kodiak changed dramatically, perhaps as early as A.D. 900, when river fishing assumed much greater importance and villages with hundreds of dwellings appeared. In about A.D. 1200, an Alutiiq group founded a settlement at the mouth of the Karluk River. Over the next 700 years, the inhabitants built, occupied, and abandoned hundreds of sod houses. Their activities resulted in a huge harvests and designed small fishing harpoons for catching fish trapped behind weirs. We don't know why this shift took place, but it may be connected with overhunting of seal rookeries. Whaling now assumed considerable importance and became a specialty in a society with numerous narrowly focused activities.

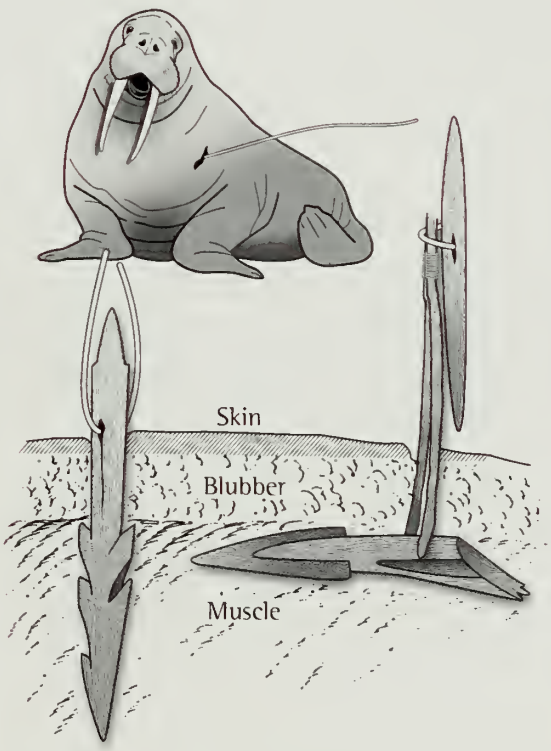
4.3a Alutiiq toggling harpoon head from Prince William Sound. CATALOGUE NO E168625, DEPARTMENT OF ANTHROPOLOGY NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION

There were also dramatic changes in society, reflected in a shift from smaller houses to larger dwellings used by the extended families needed to harvest large salmon runs. At the same time, society became ranked, more hierarchical, as wealth and trade and the ability to command labor assumed much greater importance, as did raiding and warfare.

Rising population densities meant that Alutiiq communities could no longer move around as readily as they had in the past. They stayed longer in one place. Each village responded to this reduced mobility in different ways, for example by eating more shellfish, which had been an important part of the diet as early as 500 B.C. They also settled along major rivers, by inland lakes, and in more exposed outer coastal settings. Some communities on the Kenai even moved inland, settling near major rivers and relying almost entirely on terrestrial foods.

Coastal groups now occupied summer and winter settlements, the latter sited by open bays where sea mammals and fish were plentiful. During the summer, extended families would camp along large freshwater streams to harvest salmon runs. Inland winter villages may have appeared as early as A.D. 1200, for fall and early winter fishing preyed on bright fish that were hard to discern in the water until mid-August. More people meant more intensive harvesting of the available food resources, also an increasing emphasis on food storage. Salmon runs assumed particular importance, since a few weeks' work could produce food for months, provided the catch was processed and dried efficiently, then stored properly.

Alutiiq sea-mammal hunters made efficient use of the toggling harpoon, first used by at least 500 B.C. A simple barbed harpoon would penetrate the animal and maintain its hold in the wound with its barbs. The toggling harpoon was a more complex artifact that swiveled beneath the skin and could not be dislodged by ice or the movements of the prey. Toggling harpoons were highly effective against larger prey like seal. For whales, the hunters relied on poisoned, razor-sharp lances and supernatural power.



4.3b How a toggling harpoon works.

A Culture of Specialists

Alutiiq society was remarkable for its intricate social life, known to us from oral traditions and from very incomplete eighteenth-century visitors' observations. From these, it's clear that wealth and political power lay in the hands of high-ranking lineages, whose ranks provided hereditary village chiefs. Such chiefs were men, but women could assume considerable power in society as shamans and healers. Wealth, the measure of success, came from trade and war, in the form of clothing, boats, whale oil, wooden boxes, baskets, and ornaments, as well as food and slaves. The chiefs had little power: They kept the loyalty of followers by redistributing their wealth, by leadership ability, and by staging elaborate ceremonial feasts. Below the high-ranking lineages were commoners and slaves, the latter acquired through trade or in war. In 1790, a slave cost twenty European glass beads.

4.4 Wooden-point sheaths and slate-end blade from the Karluk One site. PHOTOGRAPH BY SVEN HAAKANSON, JR. ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY KONIAG, INC COLLECTION.

This was a culture of specialists, among them whale hunters, shamans, weather forecasters, storytellers, and midwives. Rank was all-important, a characteristic of local societies, where there were plentiful if highly variable food supplies and people tended to live at the same location for many generations. With such abundance, there appears to have been a need for powerful individuals who managed risk in a dynamic environment where plenty and hunger were close neighbors. They used trading activity as one way of risk management and served as diplomats in the intricate world of intergroup politics. Such politics revolved around trade and war, around ever-shifting alliances reinforced by marriages and great feasts where chiefly hosts reciprocated hospitality. Such alliances sometimes transcended group boundaries and involved neighboring Dena'ina and Tlingit communities. Trade networks, which often involved political alliances, handled all manner of commodities, including high-quality slate and walrus ivory, caribou parkas and antlers, and dentalium seashells from the Northwest Coast.

The Whalers

Two specialists enjoyed more prestige than whalers. Every spring, whales migrated from the south into the Gulf of Alaska. They spent the summer months feeding along the coasts of the Alutiiq homeland. The great beasts were a vital source of meat, blubber, bone, intestines, and sinew. Most Alaskan and Asian people, and the Makah of Washington State's Olympic Peninsula far to the south, hunted whales from large open skin boats or, in the case of the Makah, from big dugout canoes. The Alutiiqs lived much more dangerously and hunted whales from kayaks. The whalers went in search of their prey armed only with poison-tipped spears or arrows. This made for memorable stories, like Ahhuhsulek, "the Whaler," told by Ralph Demidoff, an Afognak Island Elder, in 1962:

> The whale was so close now he could touch it with his paddle. The whaler stood up, and, after motioning to the boy to dip his paddle deep to steady the kayak, struck with all his might, sinking the spear point deep into the whale. Then he pushed the shaft hard to the side and jerked it loose. The whale, feeling the spear in its side, threw its fluke high in the air and went down in a steep dive."

4.5 Hunters in a pair of *baidarkas*, seen from the Russian vessel *Seniavin* off Unalaska in 1827. The hunter steadies his craft by holding the paddle in the water while throwing his spear. Lithograph from a drawing by Friedrich H. von Kittlitz, in the atlas accompanying *Litke's Voyage*, 1835. He compared the hunters' skill to that shown by Homeric charioteers in ancient Greece casting spears in the heat of battle while driving at full speed.

COURTESY OF YALE COLLECTION OF WESTERN AMERICANA, BEINECKE LIBRARY, YALE UNIVERSITY.

Alutiiq whale hunting relied on highly effective poison, brewed from the root of the monkshood (*Aconitum* sp.), which was dried and pounded or grated before being soaked in water and fermented. Aconite was a very powerful poison when smeared on slate spear heads. To enhance aconite's magical potency, the hunters added human fat, taken from the corpses of high-ranking individuals or deceased whalers who were taken to remote places, disemboweled in a symbolic killing, and soaked in water before the rendering of the fat over an open fire. At least some of the corpses were smoked, dried, and

Slate whaling lances. PHOTOGRAPH BY SVEN HAAKANSON, JR. COURTESY OF BARANOV MUSEUM

4.7 "Aleutians striking humpback whales off Akootan Island, Bering Sea." Date unknown. Henry William Elliott's dramatic and considerably romanticized painting provides a sense of the drama and hazards of whale hunting from kayaks, as practiced by the Alutiiqs. MS 7110, 08594800, NATIONAL ANTHROPOLOGICAL ARCHIVES, SMITHSONIAN INSTITUTION.

stuffed with moss and herbs, then dressed in their finery. Several mummy caves were found by early explorers in the Prince William Sound area. Such caves served as places to store whaling equipment, and sometimes the skulls of disinterred and butchered individuals. Here, too, the whalers performed ritual whale hunts with small, fat-smeared spears and model boats.

Whale-hunting poison was so powerful that it was said that birds flying over a whaling kayak would drop dead from the scent of the aconite. Children were warned not to drink water from streams that flowed from whalers' caves. Parents also taught their families not to touch discarded artifacts they found in the soil, lest shamans had rubbed them with poison. There were many stories of people who were poisoned by a substance so toxic that it could disable an adult whale.

The hunters smeared aconite on long, slender slate blades, which were so thin that they broke off inside the whale, usually killing the animal by paralyzing its flipper or tail and making it unable to dive or feed so that it eventually drowned. Each whaler marked his spear heads, so that a carcass could be identified when it drifted ashore.

A whaler was both revered and feared, akin to a shaman with his special connections to the spiritual world. He was an *arwarsuk*, "a shaman with power to kill sea mammals." His was a hereditary occupation, passed from father to those of his sons who showed potential aptitude for it. An apprentice went through several initiation ceremonies before becoming a whaler in his own right. Unfortunately, details of these rites are lost.

Private rituals surrounded every aspect of the hunt—the symbolic preparation of hunting weapons, the moment of sighting the quarry, the casting of the spear, and of course the striking of the whale. Every whaler had his own chants, gestures, and incantations, his personal talismans such as

eagle's feathers and colored pebbles. Part of the rituals is said to have involved rock paintings of whales and whale people in remote caves and shelters, which helped ensure success in the hunt.

Whalers lived apart from their village for the duration of their work, usually in remote and inaccessible places atop cliffs or in thick forests. A hunt would begin with the whaler going into isolation, for he was considered unclean. This was when he would mentally prepare himself for the hunt. Then he would don his high-crowned bentwood helmet that symbolically transformed him into a killer whale, so that he was on an equal footing with his prey. While he was out hunting, his wife would remain at home, lying down and refraining from eating, emulating the passive behavior of a whale. The hunt was a place and time charged with power, appreciated only by those initiated into the hunt.

When a whale was spotted in a bay, the whaler would paddle across its mouth with a bag of human fat and intestines hanging over the side of his kayak. This symbolic ensnaring of the prey with an oil slick preceded the actual hunt, which began with the whaler drawing figures such as crabs or human hands on his kayak in human fat as he chanted an incantation. Once he had approached the whale and speared it, the whaler would again chant, pointing his now snapped-off spear head at different wind directions, to ensure the dead creature would reach the shore and not drift out to sea.

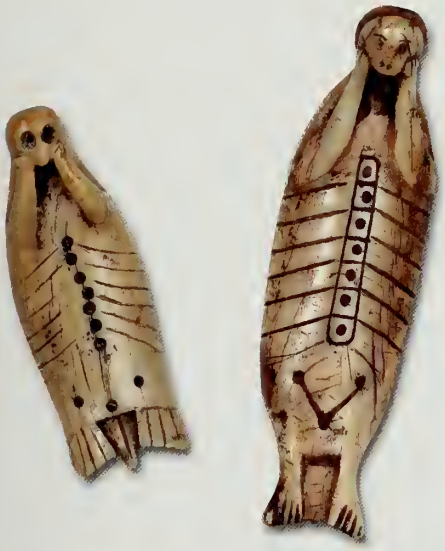
Once the hunt was over, the whaler would store his hunting weapons in their sacred place. Upon his return home, the hunter would again isolate himself for several days, to cleanse him of his contact with the supernatural.

The entire community butchered the whale for its flesh and precious oil, also for its vital raw materials. The oil preserved berries and other foods, and fueled stone lamps for light and heat.

Sea-Mammal Hunting

The Alutiiqs were also expert seal and sea-lion hunters. They not only consumed the flesh of their prey, but also used every part of their prey for different purposes. Seal stomachs made excellent freshwater containers; sinews became thread and cord. Their oil waterproofed clothing and skin boats. As with whale hunts, kayaks figured large in seal and sea-lion hunts. The hunter would paddle quietly, hoping to surprise a sleeping animal with a quick thrust from a light toggle harpoon. The harpoon was attached to a line and an air bladder, which enabled the hunter to track a wounded beast. Sometimes a seal hunter would suspend a fiber net across the mouth of a cove or narrow defile where his prey slept on nearby rocks. Then he would shout and hope to trap the frightened animals in the net.

Like other northern hunters, the Alutiiqs were also expert with decoys. The hunter would don a wooden seal mask or a sealskin, then hide at a rookery and make seal cries. Eventually, a curious beast would approach within harpooning distance. Sea otters were a prized quarry, with important spiritual associations. The Alutiiqs believed that sea otters were once human beings, so much so that the Chugach, among others, returned the bones of butchered otters and other animals to the sea. In this way, their prey's consciousness, or sua, was released, to be reincarnated. The hunters would fasten ivory amulets of sea otters inside their kayak cockpits; the amulets were usually of a sleeping animal, the ribs and spine often incised onto the amulet. The hunters would seek otters in double-hatched kayaks, tracking or encircling them when sighted, then firing at them with harpoons or arrows when they came to the surface to breathe. A string attached to the weapon would track the animal as it slowed down after repeated dives, so attached to the shaft that the latter would drag sideward through the water to slow down the quarry. The exhausted otter would then be clubbed.



4.8 Ivory sea-otter amulets from Napartalek, Bristol Bay, 1887–1893. These amulets, perhaps of Yup'ik manufacture, are similar to those fastened inside the cockpits of otter hunters' kayaks.
CATALOGUE NO. E168626, DEPARTMENT OF ANTHROPOLOGY, NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION.

A Palimpsest of Ritual

A rich and constantly changing body of spiritual beliefs, *ugkwepet*, sustained and still sustains Alutiiq society. We know something of these intangibles from a jigsaw puzzle of sources, including oral traditions, archaeology, contemporary recollections, and historical observations, collected by the French linguist Alphonse Pinart from 1871 to 1872, as well as by others. It's clear that the roots of Alutiiq beliefs go deep into the past.

The hunting may have been ruthless, but Alutiiq hunters treated their prey with great respect. A battery of personal rituals, hunting ceremonies, and rules of conduct helped maintain harmony between

4.9 Taking cod from a *baidarka*, Captain's Island, Alaska. HENRY WILLIAM ELLIOTT, 1872. MS 7119, INV. 08594800, NATIONAL ANTHROPOLOGICAL ARCHIVES, SMITHSONIAN INSTITUTION.

living people and their quarry, and between humans and the supernatural beings that controlled their lives.

Chants, dances, songs, and stories brought to life the spirits who brought hunting success. The Alutiiq word *suk* is the "personified consciousness of an animal, plant, place, thing, or natural force such as wind or fire." *Suk* spirits could assume human form, sometimes making themselves visible to living people. Alutiiq oral traditions refer to birds that opened their beaks to reveal a human face inside, or to an animal that peeled back its snout to show the person behind it. Many people encountered *suks* in dreams as they woke, a time when people were drawn closer to the spiritual world.

Even today, Lam Sua, "the person of the universe," is supremely important, but invisible to humans, sometimes equated these days with the God of Orthodox Christianity. Then there was the female Imam Sua, personifying all sea animals, who lived at the bottom of the ocean. Numan Sua dwelt in the forest, mistress of all land animals. A carefully scheduled round of ceremonies and rituals, also appropriate behavior, interceded with these spirits and begged their forbearance.

Suks were spirits and were quite distinct from *sudunha*, the soul not only of a human, but also of an animal. Souls were immortal and returned to the world after their owner died, in the body of a new human or beast. There was, then, a cycle of reincarnation, which ensured that human communities survived and that new generations of game animals nourished them. Important ceremonies restored animals' souls to the environment, far beyond the custom of casting sea-otter bones into the sea. The Alutiiq Midwinter Hunting Festival saw masks transform dancers into animal-people, showing spirits with human, animal, or mixed characteristics. Physical transformation was central to Alutiiq belief, for humans and suk were similar in consciousness, intelligence, and even language. Behind each costume, each mask, lay complex stories and songs. Only about seventeen such songs survive today. We know, for example, that Alutiiq mythology began with the creator, Raven, who brought daylight by letting the sun out of a box, releasing the moon and stars, and teaching people to make fire. Raven was a sky spirit, who beat his wings to create storms. His angry eyes sent flashes of lightning across mountain peaks. He was also an evil presence, an outsider, constantly searching for a human wife without success, using tricks and magical powers to achieve his ends.

Much of this ritual depended on shamans, people of power.

People of Power

A *Kata'alek*, or a shaman, is one who has supernatural power. Shamans were active in Alutiiq communities up until as recently as the 1940s. The word *"shaman"* comes from the Siberian Tungus word, saman, and was introduced by the Russians after European contact. Such men and women were powerful members of Alutiiq society long before Europeans arrived. They were the stuff of legend—able to turn themselves into animals, to burrow deep into the earth, and to fly freely through the supernatural world. They were curers and mind readers; they could foretell the future and control the weather. Some were forces for evil; others were more benign. A person could become a shaman by seeking spirit helpers in the wilderness. Or a child's parents could apprentice him or her to a master practitioner. A few individuals even became shamans by accident after a life-changing experience.

Shamans' power depended on their ability to command the respect of a community. For this reason, public performances were powerful weapons in their supernatural armory. Elaborately painted, often wearing masks, they would enter trances while singing and dancing. As the drumming

intensified, they would twist and turn in violent trance, uttering words in a language no one understood. Once the trance was over, shamans would tell the audience what they had learned. They could predict the success of a hunt, or could heal someone after an elaborate dance. They were experts with herbal medicines and could find missing people or manipulate people's minds, sometimes with evil intent. The credibility of shamans depended on their ability to convince people that their powers were effective.

Thousands of years of cultural change shaped Alutiiq society before European contact. Some of these changes resulted from minor climatic changes, others from shifts in animal distributions and from human factors, such as new weaponry, expanding trade networks, and war. However, behind these many shifts lay a constant thread of collective identity and spiritual awareness that connected the living and supernatural worlds in a single, if ever-changing, continuum. The frontiers of Alutiiq hunting grounds might ebb and flow with the years, villages shift to new locations, alliances wither and prosper, but the ancient verities of the respectful relationship between humans and animals, and among the living, the ancestors, and the spirits, continued to govern human behavior and the dynamics of the food quest and the hunt.

To the Alutiiq people, the landscape was alive, imbued with powerful spiritual meaning, and part of a layered world with many sacred places known to only a handful of people. We explore two of these sacred places in the next three chapters.

5

Tuxedni Rock Shelter

The tides run fast in the Tuxedni River, where the painted rock shelter lies far upstream from the Cook Inlet. Our mother vessel with its powerful outboards stopped in deep water well downstream just after high tide. We dropped into kayaks and found ourselves paddling against a powerful stream, hugging the eastern bank where the current had scoured a deeper channel. Progress was slow; our paddles sometimes touched the sandy bottom. I was only too aware that the Tuxedni is a braided expanse of mud, sand, and shallow water channels at low tide. Even a kayak runs aground at low tide here.

We paddled a seemingly endless distance upstream for an hour-and-a-half, close to grassy banks backed by dense forest. Just downstream of the shelter, the grass gave way to low granite cliffs, ending in a small promontory that offers some protection from the south. We suddenly found ourselves in a tiny bay, bound by a low sandbank just upstream. We nestled our kayaks close to the bank. I slipped in my waders as we scrambled ashore and ended up half in the water and half out. The 48-degree water chilled my waist and right leg as I squelched up to the nearby rock face.

I'd never have found the paintings had I ventured here alone. There are no conspicuous landmarks to define the place, no prominent overhangs that offer shelter, just a small bay and sandbank that dries out at low water. The fractured walls of the shallow rock shelter lie behind a curtain of dense vegetation. We saw the red raven claw symbol at once, seemingly placed carefully on a smooth rock face, as if to mark the place. Tuxedni is a private spot. The sense of isolation is overwhelming, yet the setting is memorable. Even today, you can only reach the paintings by kayak at the top of the tide, or by landing in a helicopter on the nearby sandbank.

I gazed out at the spectacular view. Across the river lies the Tuxedni Glacier, today a shadow of what it must have been in ancient times, before today's warming. It is said to have advanced as far as the river channel opposite the site during the Little Ice Age. The late-afternoon sun cast mountain peaks upstream in dark shadow, gray clouds layered across their summits. Fretted sunlight shone through the trees onto the painted rock faces. I wondered if the setting helped make a connection between the direction of the setting sun and the long-forgotten rituals that unfolded at this special place.

Tuxedni was easier to visit when people moved around by kayak, camping in river valleys where they fished and hunted. But it was still a remote location, a place imbued with supernatural power, a rock shelter where shamans conducted rituals, perhaps in solitude but certainly with the company of no more than a handful of people. There was space for no more.

5.1 Looking down the Tuxedni River into Tuxedni Bay with Chisik Island in the distance. PHOTOGRAPH BY PAGE SPENCER. NATIONAL PARK SERVICE.

Archaeologists at Tuxedni

Frederica de Laguna traveled widely through the Cook Inlet in the early 1930s. She came up the Tuxedni River with her assistant, Jack Fields, a trapper originally from Missouri, in June 1932. They experienced considerable difficulty navigating the tidal waters and were stranded for hours in the shallows. De Laguna located the rock shelter with the aid of at least two Indian informants, Mrs. Mann, "an Indian of Kenai," and Fitka Boloshov, a "Seldovia Indian." The 1930s were the days of robust fieldwork and scant regard for conservation. De Laguna readily admitted that she applied gasoline, wood alcohol, and kerosene to the rock faces to enhance the images. She found that wood alcohol was most effective for intensifying the color, a treatment that sets modern investigators' hair on end. Today's digital enhancement is far more effective and does not damage the paintings. After these draconian measures, de Laguna proclaimed the art "the work of Eskimo." She also considered it to be of considerable age. Some of the figures seemed to resemble whales, so she associated the art with whalers and shamans, an interpretation that has stood the test of time.

De Laguna also excavated in the shallow deposits among the rock falls below the painted surfaces.

5.2 The environs of Tuxedni rock shelter. PHOTOGRAPH COURTESY OF THE NATIONAL PARK SERVICE.

She found a "deep deposit of earth and animal bones" mingled with fallen blocks, the bones including those of seal and porpoise, also bear and smaller terrestrial animals. Unfortunately, de Laguna's finds are lost, so no one can obtain radiocarbon dates from the bones or tiny charcoal fragments that were part of her collection. Tuxedni and its paintings are still undated.

De Laguna was convinced that the pictographs were not the work of the local Dena'ina, which meant that earlier Alutiiq visitors painted them. Anthropologist Cornelius Osgood, who had studied the Dena'ina, agreed, for the local people had no knowledge of the meaning of the paintings when they saw them. (To the irritation of their Russian overlords, the historic Dena'ina did not hunt the great whales and refused to learn how to do so.)

5.3 General view of the Tuxedni paintings. PHOTOGRAPH BY J. HENDERSON. COURTESY OF THE NATIONAL PARK SERVICE

Years passed, with few visitors to the site. Then, in 1976, the Cook Inlet Native Corporation selected the two rock art sites as historical places under the Alaska Native Claims Settlement Act. In 1987, seven years after Lake Clark Park was founded, government archaeologists systematically mapped and photographed Tuxedni and Clam Cove rock shelters for the first time as part of a long-term process of monitoring the art. A major step forward came when Jeanne Schaaf, Chief of Cultural Resources for the Park, obtained funding for a project to document, research, and prepare a preservation plan for the two locations. The first phase involved a complete photographic record of the sites in the hands of James Henderson, an expert in such photography, completed with the assistance of Schaaf and archaeologist Melissa Baird of the University of Oregon in 2001. The Park Service also executed a Cooperative Agreement with the Department of Anthropology at the University of Oregon in the same year—to analyze Frederica de Laguna's notes and finds, obtain radiocarbon dates from existing collections, and study the paint and attempt to date it with Accelerator Mass Spectrometry (AMS) radiocarbon dating technology. The Agreement also called for a study of the anthropological symbolism of the art in an Alaska-wide and broader context, as well as the development of a preservation plan. Conservator Monica Shah completed a comprehensive report on the sites in 2006, summarized in the Appendix.

Under the Cooperative Agreement, Melissa Baird undertook a comprehensive study of Clam Cove and Tuxedni, which she completed in 2003. She also wrote a formal application for the inclusion of the two sites on the National Register of Historic Places. My descriptions of the two sites are based on her work, Henderson's photographs, and my own observations after a visit in September 2007.

5.4 Monica Shah working at Tuxedni. PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE

The Paintings

Tuxedni rock shelter lies on a terrace about 39 feet (12 m) above sea level, with a grassy marsh just to the west. You clamber up a short slope to the overhang, which forms part of the base of a mountain peak that rises to 3,500 feet (1,067 m) high above the shelter. Almost certainly, anyone visiting the site in ancient times would have arrived by kayak and climbed up to the shelter. To bring a larger skin boat in here would have required arriving on a high tide when there was enough water to navigate upstream. The tides add greatly to the remoteness of the place. Access by land is arduous and virtually impossible, adding to the general inaccessibility of the rock shelter, except at high tide.

A craggy overhang heavily festooned with trees and dense brush extends over the pictographs, protecting the near-vertical rock face used by the artists, which faces to the south and west, in the general direction of the afternoon sun. Rock fall from the granite cliff litters the terrace below it, boulders so numerous that they hindered de Laguna's excavation in 1932. Despite some trees and vegetation that filter the sunlight, the pictographs are much weathered. Lichens, moss, and an unidentified white deposit cover much of the rock face.

A brick red symbol, said to represent a raven's claw, confronts you from a flat surface as you approach the rock shelter. The pictograph faces the river, so placed that it is almost like an ownership symbol and signpost.

A weathered two-man kayak paddles upstream on a summer's day. The paddlers stay close to the eastern bank, searching the low cliffs for their destination. Only one of them has been there before, an older man wearing a whaler's bentwood hat adorned with his helping spirits and his personal hunting history. He steers the kayak close to the bank, then eases his way past a rocky outcrop and looks to his right by the grassy shore. The freshly painted raven's claw stands out on the granite, the place where rituals have unfolded for generations . . . .

The Dena'ina considered Raven the creator of the heavens, the skies, and the earth, and believed that the living birds themselves had the power to harm, help, or kill people. Perhaps more significant, the Alutiiqs have oral traditions that associate ravens with the killing of whales, while both Aleut and Eskimo art associate ravens with the whale hunt.

All the Tuxedni pictographs are executed in the same red-brick color as the raven's claw, probably a mixture of red ochre (hematite) with a binding substance like animal fat, fish grease, blood, or seal oil. Unfortunately, sophisticated chemical and physical analyses failed to identify the binder. The artists may have used a stick, a pointer, or a brush made from animal hair such as caribou.

There are twenty-six images in all, covering an area 13 feet by 10 feet (4 m by 3 m), grouped by

5.5 The raven symbol. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE.

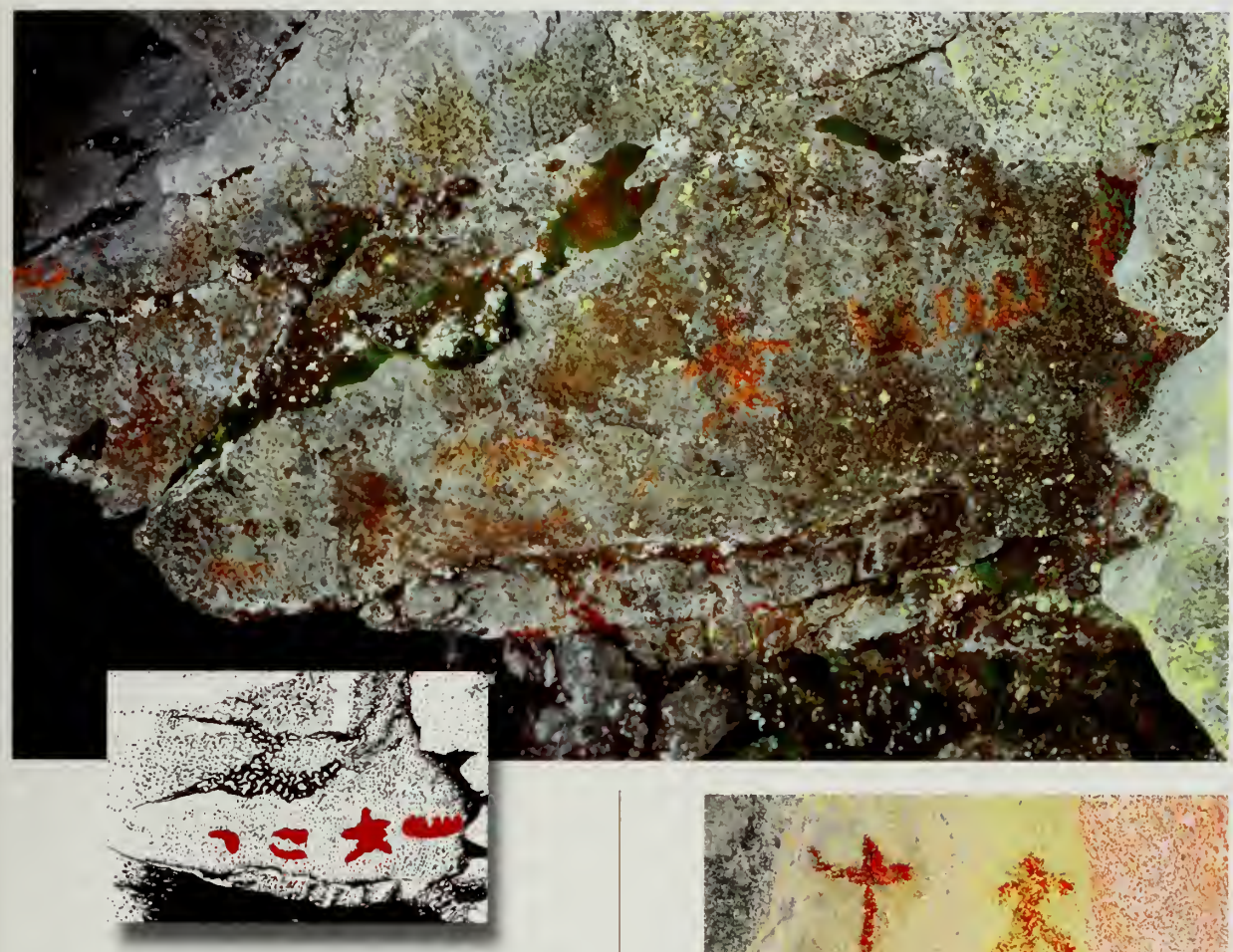
5.6 A humpback whale fluke at sunset. RON SANFORD / CORBIS.

modern investigators into a variety of associations. For convenience, Henderson and Schaaf divided the rock face into thirteen arbitrary panels, defined by natural cracks on the rock face. Whether these groupings coincide with deliberate placements by the original artists is unknown.

I worked from west to east when looking at the paintings, starting to the left of the raven claw. I first encountered a painting of a crescent-shaped boat, perhaps an *angyaq*, with at least four crew members. Immediately to the left, a human figure with outstretched arms and legs and a well-marked penis holds a club, perhaps used in the hunt. This prominent individual forms the center of the panel, with a grouping of three images on his left, one of which may depict the oblong body of a whale. Another whale with a prominent dorsal fin, perhaps a whale breaching, completes the grouping.

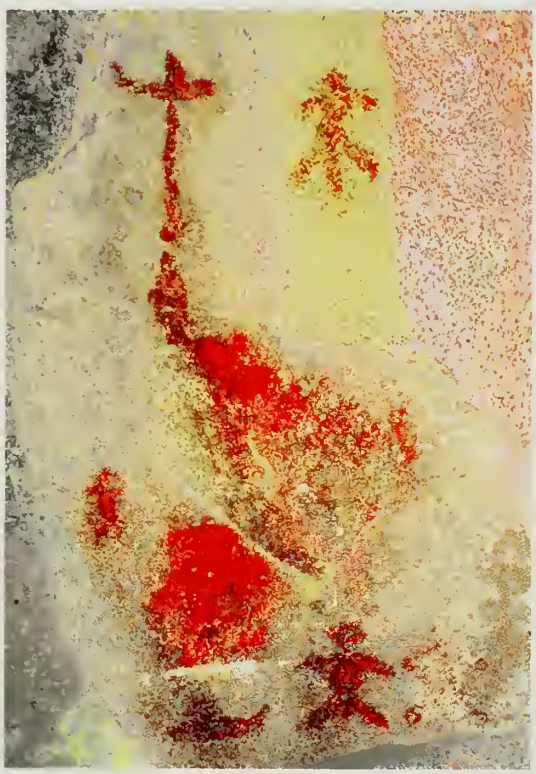
Next I puzzled over some faint stains and the dim figure of what appeared to be another whale on the panel under the raven claw, before looking upward to the right of the symbol at the highest pictographs on the face. A human with outstretched arms and long torso stands at top left, over 6 feet (2 m) above the ground. The sexless person has no legs. The paintings connect to a large pigment stain immediately below it. Another human figure, this time with outstretched arms and legs and a well-defined penis, appears to its right. Below, a figure in a crescent-shaped boat, perhaps a kayak, accompanies two more people with outstretched limbs, also with either penises or labia.

By this time, I noticed a consistency in the treatment of human figures. Almost all of them had outstretched arms and legs, as if excited and leaping off the ground. These were not passive observers, but people caught up irresistibly in some form of activity like dancing.



5.7 A crescent-shaped *angyaq* with crew members; to left a human figure with a club, and at least two whales. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006

In a rock shelter on a dark night, the flames cast long shadows on the walls. Wood smoke swirls slightly in the soft night breeze, wreathing freshly painted human figures and animals on the wall in flickers and shadows. Only a few people are around the fire, listening to the shaman's chant. He beats a drum as he recites age-old tales of humans and whales, of people and animals. The listeners feel the power; painted figures on



5.8 Humans, one with an elongated torso, and a figure in a kayak (bottom). The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE.

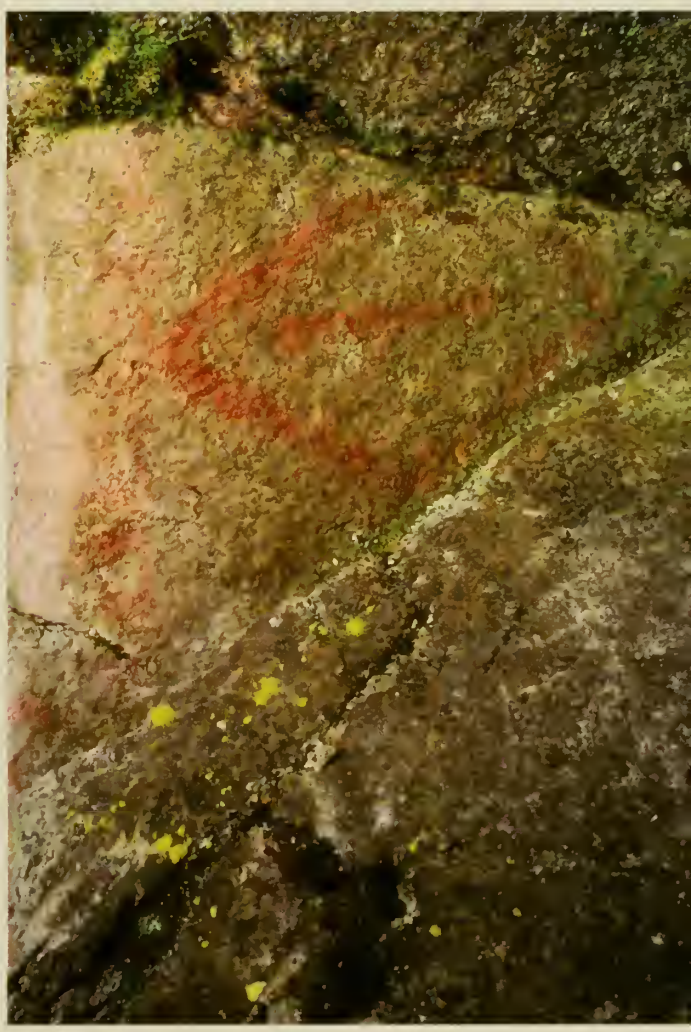
the rock face seem to come alive and move with the excitement and danger of the hunt. They spring to their feet, leap and dance, arms and legs outstretched, as the shaman enters a trance and invokes supernatural powers . . . .

At a place like Tuxedni, I found that imagination and science went hand-in-hand, for the pictographs exercised a powerful spell. The magic of the shelter became stronger as I deciphered a conspicuous panel slanted at a 45-degree angle defined by a crack in the rock. A bird with a long neck and no wings, perhaps a loon, a powerful supernatural creature, appears to swim in the water. The artist used a dark spot on the rock for the eye. A large whale follows, drawn with an oblong body, a conspicuous dorsal fin, and a prominent fluke. The beast appears to be moving, headed in the same direction as the swimming bird. A kayak

perhaps a swan, a killer whale, a kayak, and a cavorting figure with a hole in its torso. digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

with an abstract paddler trails the whale. De Laguna thought that the occupant was wearing a hunting helmet with a brim "like those worn . . . by the southern Eskimo and the Aleut." A short gap, then an anthropomorphic figure cavorts, with the usual outstretched arms and legs, but unique in that a circle in the middle of the torso was left unpainted. Baird speculates that a shaman had opened a corpse when preparing it for a whaling ceremony, but at this historical range we will never decipher the figure's meaning. An *angyaq*-like boat, this time with a large crew, follows the human figure.

The paintings continued under a low overhang close to the ground. The only way I could view the concealed image was to lie on my back, not a comfortable posture when you are soaking wet



5.10 Eye-like symbol under the overhang. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

5.11 A crescent-shaped "ladder" of lines, perhaps a whale's ribs or a tally. The image is digitally enhanced.
PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

from the waist down. But the image was worth the effort, a painting of an eye-like symbol, connected to nine evenly spaced lines that lie parallel to a conspicuous line within the eye. Frederica de Laguna remarked on their similarity to ancient ladder motifs known from art in southern British Columbia. In another imaginative interpretation, she remarked that the image resembled a pictograph of a vulva called "Coyote's Wife," used by the Thompson Indians of British Columbia. Alternatively, the painting may represent an eye. Eyes appear to have been powerful symbols in Kachemak culture, for artificial eyes appear in the eye sockets of some of their burials. They were a means to discern between the living and supernatural worlds. De Laguna reported that ladder patterns were a common Eskimo art motif. More practically, Melissa Baird notes that the lines appear to suggest counting or tallying. She may be correct. The image seems set apart, as if it were placed so that only a few people could view it, as if it were tabooed, or had intense ritual significance. Baird remarks: "The underbelly of the rock seems vulnerable, like the underbelly of an animal or marine mammal." Perhaps it represented a symbolic passage into the rock, or a record of the number of whales killed by the visitors.

Continuing the possible counting motif, immediately to the right thirteen conspicuous horizontal lines form a crescent-shaped motif, or would if the ends of the lines were joined. Alternatively, they could represent a whale's ribs.

I followed the paintings eastward as they petered out in a vertical series of paintings. At top is a small whale drawn in profile with fluke, oblong body, and dorsal fin, as if it is swimming. A prominent human figure with the usual outstretched arms, legs, and penis prances below the whale, above a small image of perhaps a kayak.

What Do the Paintings Mean?

By the time we finished inspecting and photographing the paintings, the tide was falling rapidly. We tumbled into our kayaks and paddled hastily downstream with the current sluicing under us. Our paddles touched the bottom time after time as we searched for deeper water. The mother ship appeared far in the distance, for she had moved downstream as the tide fell. We ran aground, managed to pole our way into deeper water closer to the bank, and clambered aboard hastily. We were just in time. The skipper ran us out of the estuary at high speed in 6 feet (1.8 m) of water past the mudflats. Had we delayed much longer, we would have spent the night in the mud.

I sorted out the jumbled impressions in my mind as the sun set and we motored home. The humans and animals were alive and imbued with movement, even if in an abstract way. I was struck, too, by the grouping of the figures, as if they were painted at different times. Above all, I had the impression that they were a small part of larger happenings, that the painting had profound meaning to those who had conducted rituals in this remote place. These were not records of actual events, but abstractions that connected humans and animals—the two dominant subjects on Tuxedni's walls. Baird recorded twenty-six pictographs at Tuxedni, depicted on ten panels. Human figures in one form or another are half of them, if you include the boat crews.

No question, Tuxedni was a place to which people returned again and again to conduct rituals that involved painting. However, painting is one thing; deliberate placement of pictographs at specific points on the wall is another. Baird divided the rock face into quadrants and found that more than three-quarters of the images came from two quadrants out of the four. The artists made no attempt to achieve symmetry, nor did they place their pictographs at, or below, eye level. We don't, of

course, know whether the blank spaces between the images were significant to the viewer.

Only one image lies in a deliberate, strategic place—the solitary raven's claw, which can be seen from the water at a greater distance than the other pictographs. Even today, it stands out to the visitor, almost as if it were a territorial or totemic marker. Beyond this obvious and deliberate placement, the pictographs tend to follow the natural fractures of the rock. Frederica de Laguna felt that they were placed randomly. Baird disagrees, believing that the natural cracks and fractures in the rock face are a kind of framing for the images. She cites the painting of a water bird, where a natural dark spot on the rock formed the eye.

The Tuxedni paintings may not depict actual events, but some of them appear to form scenes, with movement implied by outstretched human limbs and the curvature of fins and the back as if a whale were breaching, sounding, or swimming. The faded images we see today have nothing like the impact that the same paintings did when they were fresh and dark against a light granite background. The artists intended for them to be seen and used contrast with the pale-colored rock to ensure that they were. For all the fading, the images are still powerful.

I got a sense of performance, of pictographs that were part of a symbolic enactment of an event involving humans and animals, almost certainly whales. If I'm right, then the paintings were part of the props of a performance carried out in a small, remote place, part of the flow of chant and story, of rituals that brought hunters and their prey together in intricate symbolic relationship. That these rituals involved whale hunting seems unquestionable, given the close association of people, watercraft, and whales on the rock face—and the Alutiiqs, eastern Aleuts, and their ancestors were the only Alaskan people to pursue whales from kayaks.

We have no way of knowing how the artists viewed the figures. Were blank spots between pictographs and panels of significance? Did the relative sizes of animals and humans have meaning? Humans dwarf a kayak. One man carries what appears to be a club and appears next to a whale painted the same size. This is a startling imbalance, considering the huge size and weight of humpback whales, which can be up to 26 feet (8 m) long and weigh as much as 9,900 pounds (4,500 kg). Perhaps the enhanced larger human figures depicted the power of people over their prey, their ability to control often-dangerous sea mammals.

The ties between animals and humans were so close in local culture that the Dena'ina considered the former as people. Alutiiq groups believed that humans could transform themselves into animals and vice versa. Oral traditions also record how people became whales when they died. This theme of transformation, of effortless passage between humanity and its prey, was a prominent feature of shamanistic performances, in which practitioners used trances to become animals. The Aleut reproduced such transformations on masks and headgear, using motifs that symbolized the close bonds between hunters and their prey.

The Alutiiqs hunted gray and humpbacked whales, porpoises, sea lions, seals, and sea otters, but of all their hunting, whaling was the most dangerous and prestigious. Whale-hunting lore passed from one generation of high-status families to the next. While the Dena'ina took beluga whales from the shore—and they were the only Athapaskans to hunt whales—they rarely if ever pursued anything larger than the beluga, and then from wooden platforms manned at low tide. The Tuxedni pictographs depict people in kayaks and angyat, also whales, so we are probably correct in attributing the paintings to Alutiiq shamans.

Elaborate rituals surrounded Alutiiq whale hunts, both before and during the hunt. The hunters paddled out with painted and carved, realistic and abstract, depictions of whales on their boats and weapons. Part of the rituals may have involved

5.12 Tuxedni River. PENNY KNUCKLES, COURTESY OF NATIONAL PARK SERVICE

symbolism surrounding birds, especially loons and swans, which protected and helped hunters during the chase. Two Yup'ik masks collected at Napaskiak near Bethel, upstream of Kuskokwim Bay north of the Alaska Peninsula, are said to show swans driving whales toward hunters. Interestingly, one Tuxedni image is almost certainly that of a bird, with oblong body, elongated neck, and pointed beak, painted without legs as swimming. De Laguna identified the painting as that of a swan. Another possibility is a loon.

A single figure paddles one of the Tuxedni kayaks. He appears to be wearing a hunting hat with a brim, of a type once used by Kodiak Island sea-lion hunters and by the Chugach of Prince William Sound. According to an important study of Aleut hunting hats by Lydia Black, such headgear was skillfully made and elaborately decorated with ivory carvings, beadwork, feathers, and painted motifs. The shape of the hat varied with the quarry being sought. The hats had powerful symbolic meaning, for they were masks that transformed the wearers into mighty hunters who acquired power to kill from their disguise, and they served as badges of courage. The Tuxedni hat seems to resemble a seal-head-shaped hat, such as is known from locations on Kodiak Island and among the Chugach, but the identification is, of course, little more than intelligent guesswork.

The time for visiting Tuxedni would be the summer months, for ice and cold would have inhibited visiting at other seasons. A red raven's claw marks the painted rock face, a place with special, but now forgotten, significance. We can imagine whalers visiting the site to perform secret rituals of transformation that changed them into the whales that they sought and prepared them for the hunt. Here shamans recited chants, perhaps went into trances, and enacted the ancient, mysterious rites of transformation that had sustained whale hunting since time immemorial.

Unfortunately, we have no radiocarbon dates for the Tuxedni paintings, for de Laguna's finds are lost. But the emphasis on whaling, the use of kayaks, and the strong ceremonial associations between whale hunters and their prey in Alutiiq society all hint that the paintings were perhaps the work of whale-hunting people from late prehistoric Alutiiq communities on the tip of the Kenai Peninsula, the nearest whalers to the Lake Clark shore. As we shall see in Chapter 6, there are solid chronological grounds from Clam Cove for this association.

5.13 A nineteenth-century Aleutian long-visored helmet. Provenence unknown. WERNER FORMAN/CORBIS.

6

Clam Cove

Gray clouds lie close to the heaving ocean, swirled to and fro by the rising wind. Heavy rain cascades down the backs of the paddlers crouched in the weathered *angyaq*. Steep-sided waves toss and turn the creaking boat as the wooden frame flexes with the swell. Occasional waves slop aboard, so the skipper keeps the stern turned into the oncoming waves. He stands at the back, peering through the curtains of rain, alert for the telltale white of breakers and rapidly shallowing water. When they set out in the morning, the weather had been fine, the ocean like a mirror. Come midday, clouds swept over the heavens and the wind increased rapidly, fortunately from astern. The *angyaq* rushes on blindly toward shore.

The steersman has been to the bay before, on a beautiful summer's day when he could see for miles. At the time, he had made a mental note of landmarks at either end of the beach—a rocky outcrop with a ridge line that ran straight up to the mountain top high above the sea, and a small islet at the other end of the sand. In this wind, he knows he will have to tuck in behind the islet and land where the swells bend round the corner with less height. His hooded eyes, partially closed against rain and wind and protected by his whaler's hat, scan the horizon and the breaking waves. He catches a glance of breakers and trees, a sighting of the steep, distinctive ridge, then the islet slightly off to the right.

The paddlers recite a chant as they swing in efficient rhythm, glad that the wind is behind them. The skipper gestures and the boat turns toward the rapidly approaching island, topped with swaying trees. He keeps a wide berth, on a course where he knows the water is deep. At a sharp call, the paddlers increase the pace and turn the angyaq abruptly toward the beach behind the outcrop. With effortless skill, the steersman pilots the boat into the beach, riding the waves. It grounds in the breakers. The crew leap out and drag the skin boat up the beach. Without much being said, they turn it over to make a shelter and light a fire. They've been lucky. The strong wind turns into a great gale as night falls. Had they been at sea, they would not have survived.

The *angyaq* steersman looks over at the dark shelter at the other end of the beach, where generations of his shaman ancestors have gone into trance and talked to the forces of the spiritual realm....

Both of Lake Clark's painted rock shelters lie firmly in the maritime environment of the Outer Cook Inlet. Whereas Tuxedni lies far up a tidal estuary, the Clam Cove shelter is right on the coast, at the edge of a beach facing the open waters of the Gulf of Alaska, close to the mouth of Chinitna Bay.

6.1 The environs of Clam Cove rock shelter. PHOTOGRAPH BY JEANNE SCHAAF, NATIONAL PARK SERVICE.

Like Tuxedni, Clam Cove is difficult for the modern visitor to approach. You can fly in and land on the beach if the tide is right—provided you're not too heavily laden. Or you can arrive by boat at high tide, then anchor close offshore and take a dinghy or kayak to the beach. We arrived in style on top of high tide on a perfect late summer's day. The constant swell from the Gulf was as quiet as it ever is, so our skipper simply backed into the shelving beach and we stepped ashore dry-shod. Then he anchored clear of the breakers while we inspected the paintings.

The beach is a favorite with bears and was once the terminus of a busy trail that linked Chinitna Bay with Lake Iliamna. People came from the interior to collect clams and to fish, also to prey on sea lions, which often sunned themselves on the beach at low tide. Dense forest with thick undergrowth backs on the beach, with a strip of sea-grass meadow behind the breakers. The sand curves gently round to a small rocky islet at the southern end of the cove. As we walked at the edge of the water, I imagined kayaks slipping round the islet and landing through the more sheltered water in its lee. Here surf conditions were often smoother and the boats could be easily hauled above the high-tide line.

Clam Cove faces the open water of the Gulf of Alaska, an unpredictable body of water, even in summer. The Outer Cook Inlet is strongly tidal, cursed with steep-sided swells, especially when the wind blows against the tide. Even today's

small-boat sailors, with their seaworthy vessels and reliable diesel engines, treat this coast with great respect and caution. The surf and often-rough conditions at the mouth of Chinitna Bay make the place inaccessible to visitors from the sea for months on end, which contributes to the isolation. Landing at Clam Cove would have been a challenge on many summer days, which must have added to the seeming remoteness and mystery of the painted shelter. As we skirted tidal sand banks and entered a small tidal estuary just to explore, I acquired a profound respect for those who hunted sea mammals along this inhospitable shore.

Approaching shore, the rock shelter is inconspicuous, nestling as it does behind a low, sloping cliff. A sharp ridge seems to point like an arrow to the peak high above the water. Whether this alignment was intentional is something we will never know, but the location for a sacred place seems as distinctive as the raven claw at Tuxedni.

A Quest for Chronology

In 1968, Joan Townsend of the University of Manitoba and two graduate students from the University of New Mexico surveyed archaeological sites near Lake Iliamna. According to Townsend, she learned of Clam Cove rock shelter from Iliamna informants, but we have no idea who they were. The archaeologists flew into the bay and landed on the beach for a brief inspection of the much-faded pictographs. Townsend had no time to excavate, so she returned the following summer, again accompanied by two graduate students, William Morgan and Jack Culley.

Just like de Laguna at Tuxedni, Townsend found that extensive rock falls restricted the area that could be excavated, so much so that she believed that the site had once been a cave. The excavators dug two large test trenches directly below the pictographs, effectively clearing the entire shelter. Townsend reported: "The midden area was composed of two bands of charcoal, each approximately one inch thick, separated from each other by a narrow, one-inch band of gray, sterile beach sand. Many flint flakes were found throughout both occupation bands." She recovered three artifacts: a possible knife, the base of what appeared to be a projectile point, and a coarse whetstone. There were traces of a midden deposit about 43 inches (109 cm) below the surface in an area that had once been the mouth of the shelter. The occupation deposits included cockles and other clams, especially the razor clam, which are still plentiful at low tide. Shellfish foraging in the intertidal zone along the beach may have been a primary reason for visiting the cove. We know from ethnographic sources that people collected shellfish intensively during early spring and summer. Most likely, visitors used the shelter as a temporary camp, perhaps when collecting clams.

How old were the occupation levels and the paintings? Were the two contemporary? Townsend had no radiocarbon dates, so she compared the few Clam Cove artifacts with those from other locations. She found that the Clam Cove tools closely resembled much earlier artifacts from the Pedro Bay site on the northeast shore of Lake Iliamna, some 15.5 miles (25 km) inland. There, similar tools were radiocarbon dated to about 2500 B.C. and belonged in the Ocean Bay Tradition.

Clam Cove became part of the corpus of Alaskan rock art, but few people visited the site. Then, in 1976, the Cook Inlet Regional Corporation selected Clam Cove (as well as Tuxedni) as a historical place under the Alaska Native Claims Settlement Act. Subsequently, five Bureau of Indian Affairs and Bureau of Land Management archaeologists visited the shelter and identified over seventy-five images on the south and west walls. They photographed the pictographs and mapped the site. The team carried out no excavations, but noted signs of looting activity in the floor.

6.2 The beach at Clam Cove, showing the peak behind the shelter. PHOTOGRAPH BY BRIAN FAGAN.

There matters stood until 1992, when National Park Service archaeologists visited the site while conducting a Park Service site inventory. They reported that "up to 80 percent of the images recorded in 1989 . . . were very faint or had exfoliated from the panels." Nine years later, the Park Service contracted with photographer James Henderson to make a complete photographic inventory of the Clam Cove paintings, using the same methods as employed at Tuxedni. He located and recorded the exact placements of the pictographs during daylight, then returned after dark to document the images photographically.

Townsend had excavated the shelter in the days before high technology revolutionized archaeology. So the Park Service contracted botanist Margaret Helzer, then of the University of Oregon, to identify six wood-charcoal fragments from the original excavations. The samples were from trees like spruce, which grow near the site. There was also some Douglas fir, a driftwood tree from far away, for it only thrives as far north as 51 degrees North, the latitude of Queen Charlotte Sound in British Columbia.

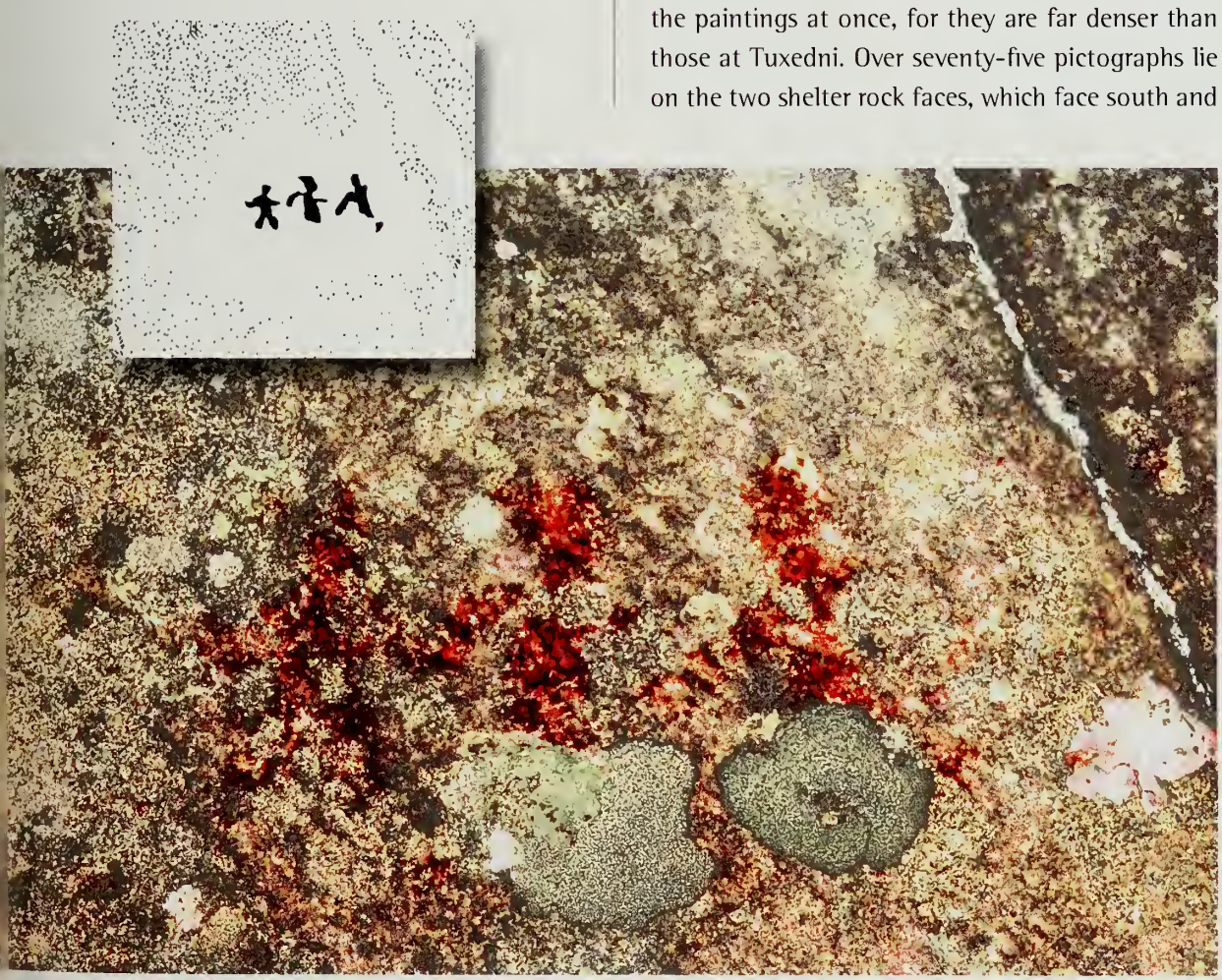
Charcoal samples meant possible radiocarbon dates. Archaeologists selected three birch samples and a single shell specimen from the Townsend collection for dating by accelerator mass spectrometry (AMS), an advanced radiocarbon dating method that can even date individual seeds. The three samples came from a pit identified by Townsend and dated to between A.D. 270 and 220, all with

a standard deviation of forty years. The shell date was somewhat later, A.D. 980, but its wider standard deviation lay within the range of the birch charcoal dates.

The dates do not, of course, date the paintings on the shelter wall, but they do show that people were visiting the site when ancestral Alutiiq hunters were active in what was to become Dena'ina country after A.D. 1000. The Clam Cove occupation is very much later than the Pedro Bay site on Lake Iliamna, perhaps an indication of how slowly tool technologies and ways of life changed in this region. The few artifacts from the excavation are similar to those found in Kachemak Bay during the first millennium A.D.

The South Wall Paintings

My visit to Clam Cove shelter was much less hard work and not nearly so dramatic as the trip to Tuxedni. I didn't get wet and there was no clambering up steep river banks. The shelter entrance lies about 29 feet (9 m) above the high tide line, close to a series of historic and late Dena'ina house depressions about 130 feet (40 m) from the shelter. The interior is much deeper than Tuxedni, which is little more than a rock face—23 feet (7 m) deep and 29 feet (9 m) wide. Sand, silt, and gravel brought in by onshore gales form the shelter floor, sealing traces of ancient human activity underground. I noticed the paintings at once, for they are far denser than those at Tuxedni. Over seventy-five pictographs lie on the two shelter rock faces, which face south and



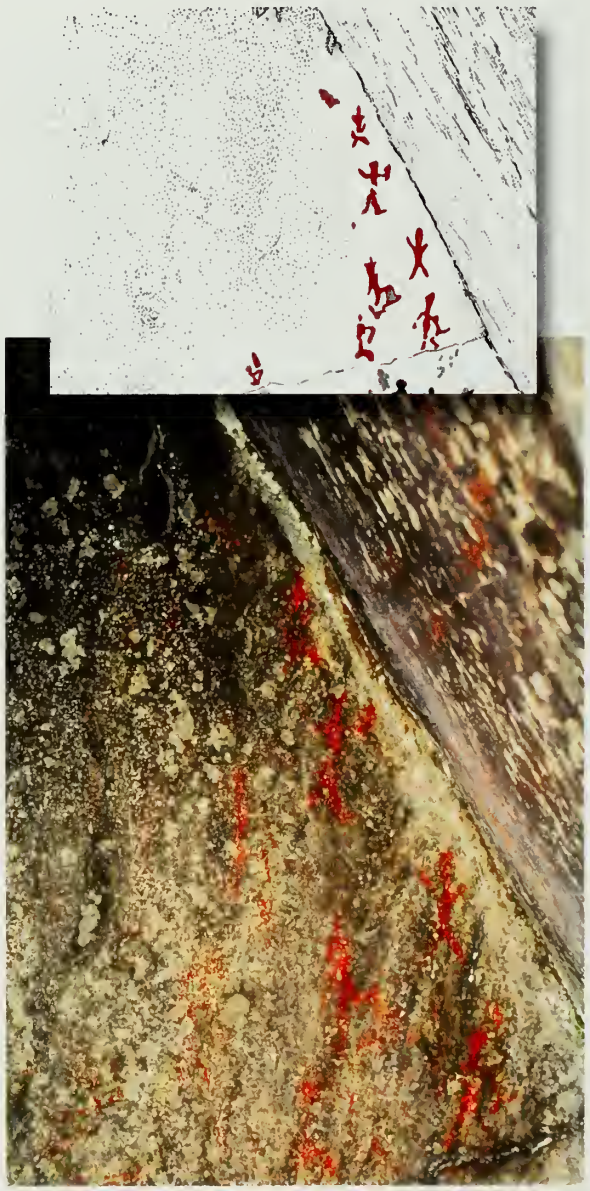
6.3 South Wall: Three symmetrical dancing figures. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

west, concentrated within relatively limited areas. The sandstone walls are only about 3 degrees off vertical and relatively smooth, making for an ideal painting surface with few fracture lines.

The Clam Cove pictographs are brick red, just like those at Tuxedni, but of a duller intensity. Here, also, the artists used red ocher, although state-of-the-art proton-induced x-ray emission analysis failed to establish the geochemical composition of the pigment. More importantly, it also proved impossible to associate ocher fragments in the dated deposits with the pictographs; the Townsend excavations were too coarse-grained to recover tiny pigment specks.

I found the easiest way to review the paintings was by working from left to right, starting with the south wall. I counted twenty-one pictographs on the rock face, although there were once many more, including some that had faded beyond recognition since first being recorded in 1987.

The outermost paintings, three symmetrical human figures, appear to be dancing with outstretched arms. They hold hands; their feet are



6.4 South Wall: A line of human figures adjacent to the crack between the south and west walls. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006

6.5 South Wall: A human figure, with somewhat relaxed legs joined by a thin line, holds what appear to be two rattles. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE

6.6 South Wall: Human figures with their legs apart and breaching whales. PHOTOGRAPH BY J. HENDERSON. COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

joined. I was struck at once by their poses, which resembled those of the human figures at Tuxedni.

Most of the south wall paintings are adjacent to the near-vertical crack that separates the two shelter walls. The outermost grouping comprises what appears to be a large bird of indeterminate species with outstretched wings, and another heavily faded image. My eyes moved up to what appeared to be one or more human figures, or perhaps a single person holding something. Above stands another abstract human figure, perhaps a human holding an animal or a club or sealskin float.

I followed a line of human figures adjacent to the wall crack. At top stand three people, the lowest a familiar image with outstretched arms and legs. Two more humans lie below the trio, the uppermost with the usual arm and leg posture, the lower holding two objects, perhaps rattles. Its legs are apart, but joined by a thin line, and the legs are more relaxed than those of the other figures. Perhaps the person is dancing, perhaps in a shamanistic performance. I ended at the bottom where six prominent human figures stand with their legs apart. One is elongated, with one arm up, the other

extended downward, as if dancing. The others are incomplete. A group of three animal figures appear below the humans, their bodies resembling whales. Two of the figures have tall dorsal fins, perhaps those of killer whales. The bodies are curved, as if the animals are swimming or breaching.

The storm has blown through and the wind has dropped. Only the subdued rush of the residual swell breaks the silence on a dark, moonlit night. The air is cold and still, the camp deserted. At the other end of the beach, a small fire flickers in the gloom, dim figures moving behind the flames. The skipper has donned his shaman's regalia and whaling hat. He recites and dances, telling the story of an ancient whale hunt by men in kayaks. As he tells the story, he grabs red paint mixed in a clam shell and paints a breaching whale, then the whaling captain, then other human figures caught up in the magic of the dance, arms and legs outstretched. The crew chant and dance with him for hour after hour as the shaman invokes the power of their prey, living beings like themselves.

The ritual lasts until dawn. As the sun rises, the exhausted men collapse onto the ground and sleep. But the shaman sits, calm after his trance, and looks out over the ocean. Behind him, his fresh paintings glisten in the dawn light, alongside those painted by his ancestors. Now the hunt can begin....

6.7 West Wall: Human figures, *angyat*, whales, and a symbol, viewed collectively. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON. COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

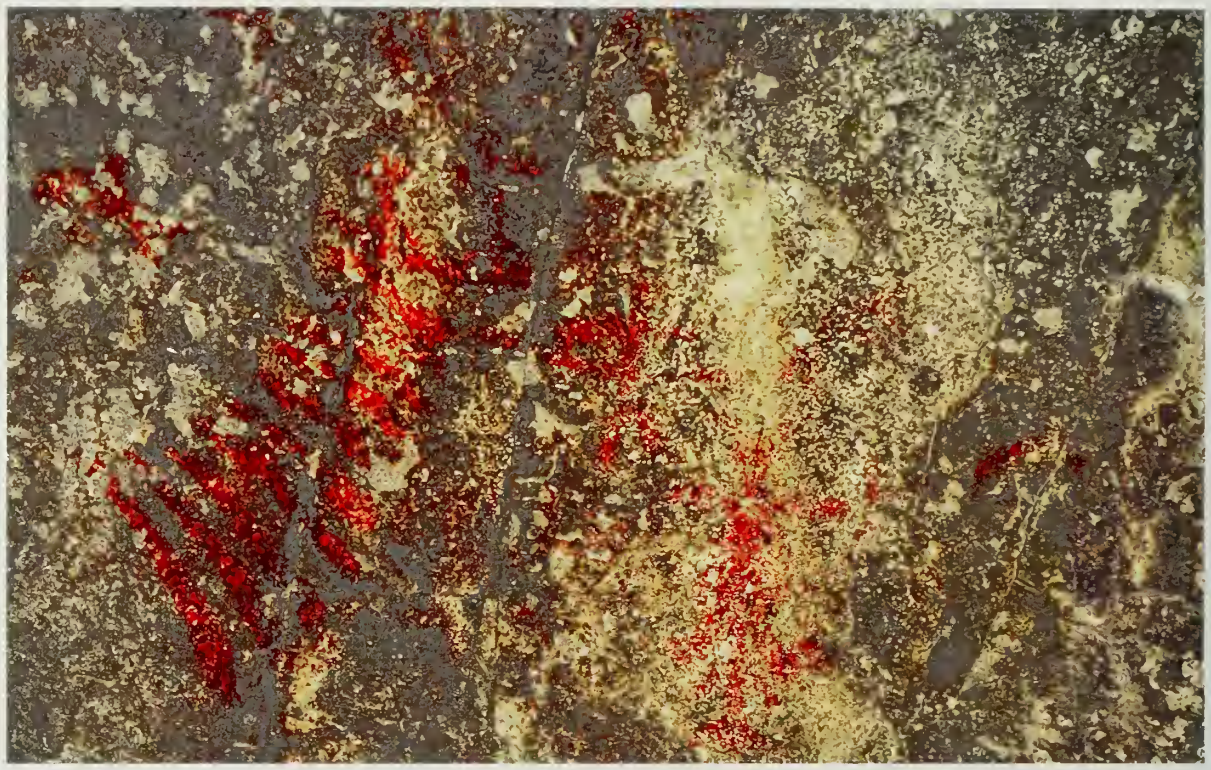
6.8 West Wall: An *angyaq*, with four paddlers and a figure standing at what appears to be the stern. A whale appears at the bottom right. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON. COURTESY OF THE NATIONAL PARK SERVICE.

The West Wall Paintings

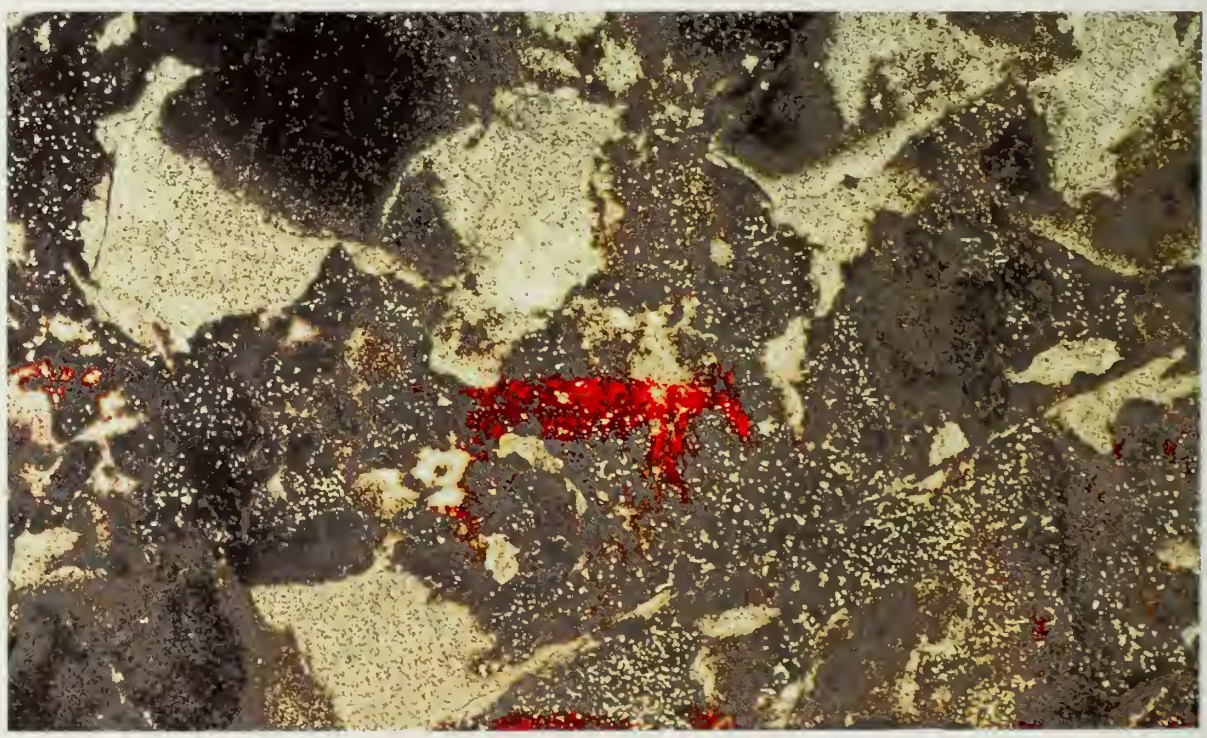
My eyes moved over the forty-three pictographs on the west wall, and I wondered why there were so many more on this face, the direction of the setting sun. Again, I started at the top, by the crack, where six incomplete human figures with short arms stand close together. None have legs. They may be part of a boat that lies directly below them. Unfortunately, the large, crescent-shaped vessel is both faint and exfoliated, but it may be an *angyaq* with four to five paddlers.

A second crescent-shaped boat, also like an *angyaq*, appears immediately below, this time with four crew members, who appear to be paddlers (there are five paddles depicted). A figure at the stern appears to be standing (or hovering). I could identify the stern from the angle of the paddles in the water. The standing figure's arm is extended, as if he is about to cast a harpoon at an animal figure to the right of the boat, perhaps a whale. Why the larger, standing figure, presumably the skipper, is harpooning from the stern is unclear, as a more logical position would be the bow—unless the paddlers are backing the boat away from the swimming animal.

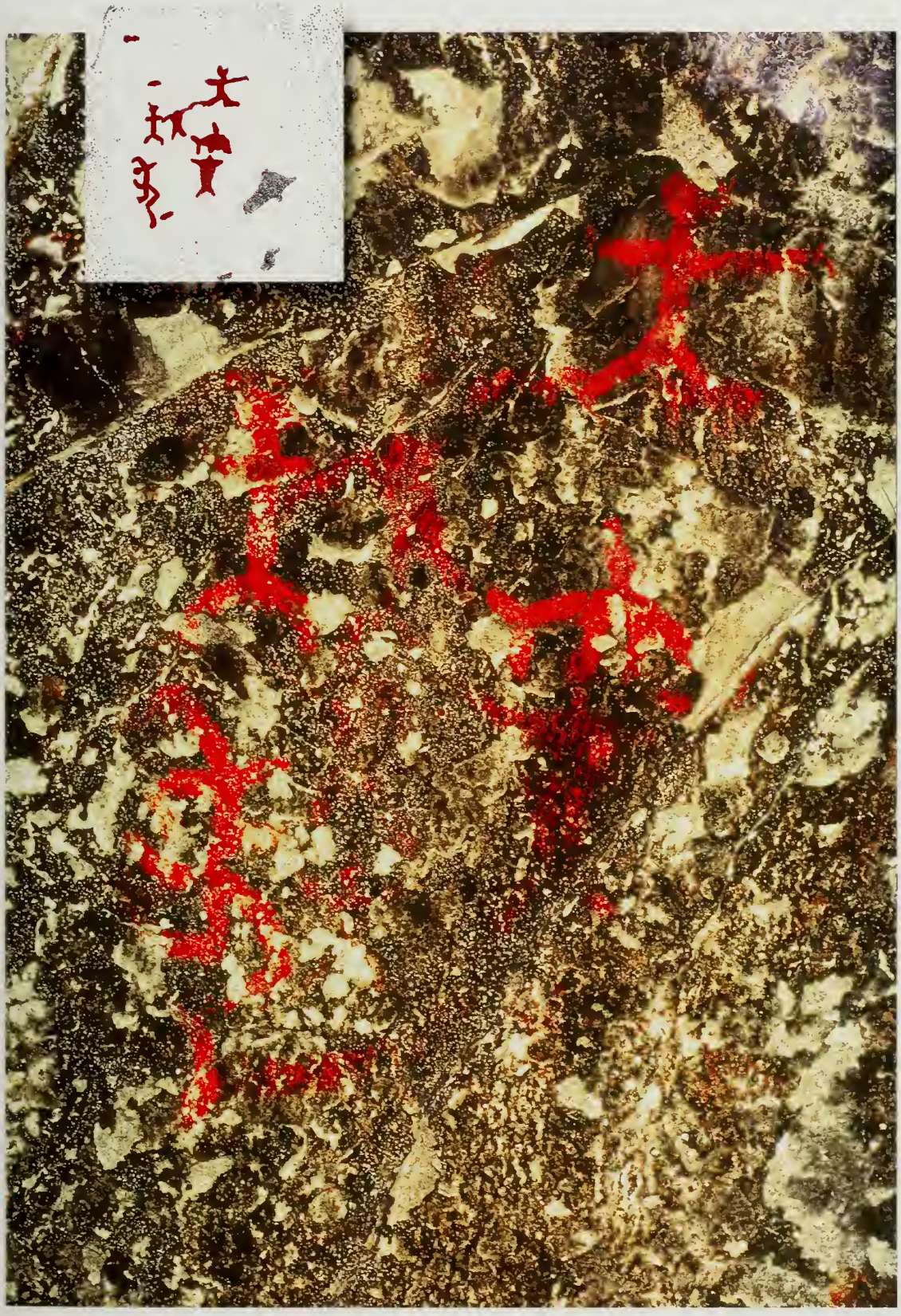
A geometric pictograph of ten parallel lines to the left of the whale is the most fascinating image at Clam Cove. The uppermost line, below what may be



6.9 West Wall: Ten parallel lines below what may be a kayak, along with two human figures, one with an unknown object between its legs. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE



6.10 West Wall: The isolated figure of an identified quadruped. The image is digitally enhanced. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE.



6.11 West Wall: Dancing figures, at least one with a headdress. The image is digitally enhanced.

PHOTOGRAPH BY J. HENDERSON. COURTESY OF THE NATIONAL PARK SERVICE. INSET FROM SHAH, 2006.

a kayak, links a human figure with, as usual, its legs apart and another, this time abstractly drawn, figure with an unknown object extending from between its legs, possibly two whale tails. Archaeologist Madonna Moss hypothesizes that the scene shows a hunter posed between a whale to the right and a count of whales that have been killed to the left.

I followed the jumble of images across the wall—an assemblage of unidentifiable figures, except for an isolated profile of a quadruped, with ears and tail clearly shown. Nearby, two human figures and a whale cavort together, the human having the usual outstretched arms and legs, a grouping surrounded by a dashed line. An abstract figure below them wears some form of headdress and appears in profile, legs bent as if it is dancing. Perhaps this is a therianthrope, a beast-like human, for it is quite unlike any other human figure from the shelter. What appear to be a breaching killer whale and a heavily exfoliated human lie just below the dashed line to the right of the abstract figure. Then the pictographs fade away to blurry blobs.

Who Painted Here?

Once we had finished photographing the paintings, we walked into the trees behind the beach, where we inspected the overgrown historic Dena'ina house pits. The slight swell had subsided to almost glass-like calm, and we climbed aboard the mother ship and set off for home base. Once again, I mulled over what we had seen.

Everyone had told me that there were resemblances between the Clam Cove and Tuxedni paintings, but it wasn't until I actually saw them that I realized just how close the similarities were. The subject matter—animals, humans, and watercraft, also abstract and geometric images—covered the same ground.

I was struck, too, by the similar treatment of humans. Once again, the Clam Cove people are at a larger scale than the animals. Most human figures appear in frontal view and are strikingly symmetrical. This gives the viewer a sense of equilibrium, of balance. Even the abstract, dancing human is visually balanced. Whether this was intentional is uncertain, for the artists did not show facial features such as appear on masks from the Kodiak and Alaska Peninsula regions, where a strong tradition of artistic symmetry appears on nineteenth- and twentieth-century Alutiiq masks. Kodiak petroglyphs also show some basic facial features—eyes, mouth, nose, and sometimes labrets.

Anyone who thinks that the artists were painting just for art's sake has only to look at the large crescent-shaped boat on the west wall. This is the largest image at the site, far larger than the second boat that appears below it. Could the contrasting sizes have implied status differences, or simply have been a matter of separate visits and different artists? We have no means of knowing. Nor can we be sure whether intentional groupings of figures, like the humans and whales on the south wall, represent specific events or activities. Did upraised arms signify a significant gesture or ceremonial activity? Again, we are in the dark.

Like Tuxedni, Clam Cove left a powerful impression on me, partly because of the concentration of pictographs on the west wall, which has a view of the water. Alutiiq families used to build their houses so they could see the ocean. Perhaps the two boats on the west wall were placed there so they could "see" the water. Melissa Baird wonders if the pictographs were part of the preparation for a voyage.

Even more than at Tuxedni, I felt there were shamanistic associations here. Baird's report alerted me in advance to the fascinating panel with the

6.12 Alutiiq artists still make hats and visors. Shown here is a bentwood hunting visor, *Beginning*, crafted by Peter Lind, Sr., 2007. It is made of Sitka spruce, glue, sinew, and acrylic paint with a linseed oil and ochre finish. Decorations include an ivory carved sea otter with India ink eyes, holding a clam shell carved of mammoth ivory. Fur seal whiskers from the Pribilof Islands adorned with ptarmigan feathers are attached to the upper front edge of the hat. Cords and tassels made of multi-colored embroidery floss are the final attachments, embellished with colored glass and white bone beads.

PHOTOGRAPH BY SVEN HAAKANSON JR. ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY PURCHASED FOR THE MUSEUM'S PERMANENT COLLECTION WITH FUNDING FROM THE RASMUSON FOUNDATION

boat, a grid of parallel lines, and a line that connects a naturalistic human with a more abstract figure. Nearby, another dancing figure, perhaps a therianthrope, appears. These, Baird believes, could be depictions of a transformation of humans into animals, a process that took place in shamanistic trances. Thus, the figures would be metaphors for trances.

Clam Cove shelter may have been a sacred place because of the dangers of landing safely at a relatively inaccessible place. I realized that only the most experienced kayak and angyaq paddlers would have landed here, for they alone would have had the seamanship skills and weather-forecasting expertise to predict settled conditions inshore. But who would come to such a place? I was struck by the different treatments of human figures, all within what were obviously established conventions. Their torsos varied from triangular to thin and elongated to rounded, even some without limbs. Do these varied depictions show differences in social status, perhaps between shamans and whale captains? Or do they show people in different mental states, perhaps contemplating the supernatural? At Tuxedni, the artists sometimes depicted ornaments or people's sex, but the pictographs tell us little. One figure at Clam Cove offers a clue as to the identity of the visitors—the abstract figure who wears what appears to be a top-knotted headdress. In an unpublished doctoral dissertation, anthropologist Dominique Desson describes elaborate whaling rituals in the Kodiak region, where the whalers would adorn themselves with red paint and wear large pointed hats fabricated of sea-lion skin. Perhaps the abstract figure is wearing such headgear.

Most of the Clam Cove animals are whales, some of them depicted in motion, perhaps breaching. A single figure of what appears to be a land mammal could be a fox or wolf, even a dog, but may also be a sea mammal such as a harbor seal, regularly hunted by the Alutiiqs in their rookeries; the pictograph is too inchoate to be identified with any precision. The bird with outstretched wings depicted on the south wall appears to resemble a thunderbird, such as often appears on Aleut hunting helmets. One example illustrated by Lydia Black in her classic study of such headgear shows a thunderbird with a whale in its talons. The thunderbird was an important creature in Yup'ik cosmology, a dangerous animal, but one whose power was desirable, especially when hunting whales. Associations between thunderbirds and whales were widespread among Inuit and Northwest Coast groups.

There are other enigmatic scenes, including the so-called grid drawing on the west wall, where a line connects two figures. A separate image above the grid appears to show an animal, perhaps a whale, or a crab claw. Crabs were important to Kodiak whaling groups, for they were believed to assist the hunters as they stalked their prey. They were symbolic of death, because they ate carrion. Dominique Desson tells the story of an Aleut whale hunter who drew his power from the crab, which could grab people from the sea. She records that whale hunters would dress themselves as crabs to seize the bodies of dead whalers or shamans before carrying them to a secret cave for secret whaling ceremonies. Like the crab, who feeds on the dead, the whaler took the corpse as a symbolic way of ultimately securing a whale to feed his community. Desson believes that donning a crab costume—such as a mask collected by Alphonse Pinart, which bears crab claws instead of a mouth—transformed the whaler into such a creature.

This association with the paintings and whaling is one of the issues we'll explore in the next chapter.

7

Ancient Painters

Tuxedni and Clam Cove's pictographs reflect a rich and long-vanished intangible realm. We cannot hope to reconstruct the private moments of introspection experienced by solitary visitors to the remote pictographs at Tuxedni, or the shaman's chants and intricate dance steps that echoed off Clam Cove shelter's walls. Gone are the colors, the masks, and the orations that invoked the power of the hunter in the face of dangerous, unpredictable beasts. Tragically, all we have is the silent testimony of a handful of artifacts and the pictographs, which are rapidly fading into historical oblivion. But the question of questions remains. Why did those who visited the two rock shelters leave paintings behind them?

The greatest mistake that we can make is to describe the Tuxedni and Clam Cove paintings as art, art in the Western sense of a Leonardo da Vinci masterpiece or a modern abstract. Lake Clark's pictographs were no more art in this sense than the magnificent Ice Age bison painted by Cro-Magnon hunters at Altamira in northern Spain about 15,000 years ago, or the stirring depictions of eland and dancing hunters executed by the San peoples of southern Africa thousands of years in the past.

The figures and abstract signs on the walls of both shelters were never intended as accurate depictions of humans or animals. Their makers—we call them artists as a convenient title—drew them as part of complex rituals, which are impossible for us to recover across a gap of many centuries. We archaeologists deal with the material remains of ancient human behavior. Our archives are surviving artifacts, usually in durable materials like stone, abandoned structures, and food remains such as butchered animal bones and seeds. Images such as pictographs only come down to us in the form of rock paintings and the occasional chance survival of decorated wooden and bone artifacts. But they are only a piece of a larger event. One has only to look at the rich decoration of the Bering Strait Eskimo traditions of 2,000 years ago to get the point.

Tuxedni and Clam Cove

Our inquiry into the meaning of the pictographs must begin with a look at the similarities and differences between the two sites. In general terms, the images from the two sites share many features and obviously come from the same general cultural tradition. At both sites, the artists used red pigment, probably hematite mixed with a binder of blood, oil, or fat. As far as can be determined, the same artifacts were used to paint the images, perhaps brushes with different tips and shapes. Only the hue of the paints differed slightly, those at Clam Cove being lighter and more subdued, perhaps a function of their exposure to rain and sunlight.

The differences in motifs at each site can be expressed in percentages—for instance, the number of human figures (49 percent at Tuxedni, 51 percent at Clam Cove)—but such figures mean little when the state of preservation is so poor and identification of many images is at best uncertain. There are more watercraft images at Tuxedni (13 percent, as opposed to 3 percent at the other site). The boats

7.1 A pencil sketch of whale hunting via kayak by Charles Scammon, 1869.
COURTESY OF THE BANCROFT LIBRARY, UNIVERSITY OF CALIFORNIA, BERKELEY.

are smaller at the former, apparently kayaks. This is hardly surprising, given the shallow water in the upper reaches of the Tuxedni River and the strong tides. The shelter is only accessible by kayak for a couple of hours on either side of high tide, and larger open skin boats with their deeper draft would have had to time their visits for high tide. But all this assumes that the paintings tell a story of people arriving at Tuxedni. They may, in fact, record ancestral stories, details of past hunts or of legendary events, or even the history attached to individual shamans, whalers, or families.

Clam Cove is another matter logistically speaking, for the beach is ideal for landing *angyat* over much of the tidal range, if wind and swell conditions are favorable. It is worth noting, however, that Alutiiq hunters traditionally used kayaks to pursue whales, spearing their prey under their flippers with a poison-tipped spear.

There was nothing haphazard about the paintings. Each image had intent, be it a single painting or a group of them, even if the fractured rock surfaces at Tuxedni restricted the painter's options. At the same time, the depictions are clearly grouped or carefully located, making use of cracks and dark spots on the rock, like the one at Tuxedni used as the eye of a water bird. At Clam Cove, the crack between the two walls may have been a frontier between different groups of pictographs.

Even more striking are the iconographic parallels. Almost all the animal images are of sea mammals, creatures that were a central part of local life, for they provided a large part of the diet, also oil and all kinds of raw materials for making clothing, boats, and weapons. The few birds that appear, such as the raven claw at Tuxedni, appear to have powerful symbolic importance, if Alutiiq traditions are any guide. Most animals are in motion, whether

breaching, swimming, or flying, apparently a conscious effort by the painter to reflect a world where the hunter would encounter his prey whilst it was moving.

At both locations, the human figures have no facial features. Melissa Baird identifies three main body shapes—triangular, elongated, and abstract—and hypothesizes that they may reflect differing social status. She points out that Alutiiq society paid close attention to rank, reflected in clothing, ornamentation, hair styles, and tattoos. This ranking depended on kin ties and wealth extending over many generations. Alutiiq chiefs came from elite families and were responsible for organizing and leading ceremonial activities. The abstract figure at Clam Cove with its headdress is not only the largest human depiction, but also unique, showing a person engaged in dancing or in a trance.

Some of the painted figures brandish weapons, among them a person at Tuxedni wielding a club-like object, perhaps a whaling weapon. One individual at Clam Cove appears to be grasping a spear. At European contact, Kodiak people wounded whales with poisoned spears fired from the front hatch of a kayak.

The boats depicted at both sites were both *angyat* and kayaks, with the latter occurring only at Tuxedni. According to the anthropologist Cornelius Osgood, the Dena'ina only adopted the kayak and *angyaq* in historic times. We also know from historical records that the Alutiiqs used open skin boats for communal hunting, and also for trade and warfare, traveling over a wide area from Prince William Sound to the outer reaches of Cook Inlet and the Kodiak Archipelago. The chances of the boat images having been painted by Alutiiq visitors seem high.

Some of the pictograph groupings may be narrative scenes that memorialize actual happenings. One Tuxedni panel groups humans, boats, and moving sea mammals, the impression of motion coming from their setting at a 45-degree angle within the boundary of the fractured rock. A panel at Clam Cove includes a boat with a crew of five people, one of them perhaps standing and casting a harpoon aimed at what appears to be a whale.

Despite many similarities, the differences between the Tuxedni and Clam Cove pictographs merit comment. Perhaps they were painted at different times during separate visits, even if the design, imagery, and general iconography clearly reflect a well-established set of stylistic conventions, which extended over a wide area of the mainland and offshore islands. The similarities are such that they clearly come from a common ancestry, even if, as some have argued, they represent territorial boundaries.

Comparisons

When Frederica de Laguna surveyed archaeological sites along the coasts of Cook Inlet and Prince William Sound in the early 1930s, she recorded pictographs in both areas, the first such survey of rock art in this area of Alaska. She wrote that the Prince William Sound pictographs "find their closest analogy in the Eskimo pictographs of Cook Inlet." The Chugach paintings from Prince William Sound appeared to have some relationship to art recorded on Kodiak and to Tlingit pictographs from the Northwest Coast.

As Melissa Baird studied the Tuxedni and Clam Cove art, she soon realized that the images closely resembled those from Prince William Sound, and she visited de Laguna to discuss the art of the two regions. The veteran anthropologist urged her to revisit the rock art sites, which she did in 2005.

De Laguna had recorded three pictograph sites in the outer reaches of Cook Inlet, located along the eastern shores of Kachemak Bay. Two sites, on Indian Island and Bear Island, were rock shelters on the southwestern shore of Kachemak Bay. Bear Island yielded a midden and images of two

humans, nineteen animals, and a boat. Some of the sea-mammal images appeared to have harpoons attached to them. Both at Bear Island and at Indian Island, de Laguna excavated occupation deposits, the one from Indian Island being, she said, of significant age, an "Old Eskimo level" about 3 feet (1 m) below surface. There were thirty vertical red stripes on the shelter overhang. Sadie Cave, some 12.4 miles (20 km) from the two islands, floods at high tide. Here, a group of four whales swim below an upper band of highly conventionalized land animals.

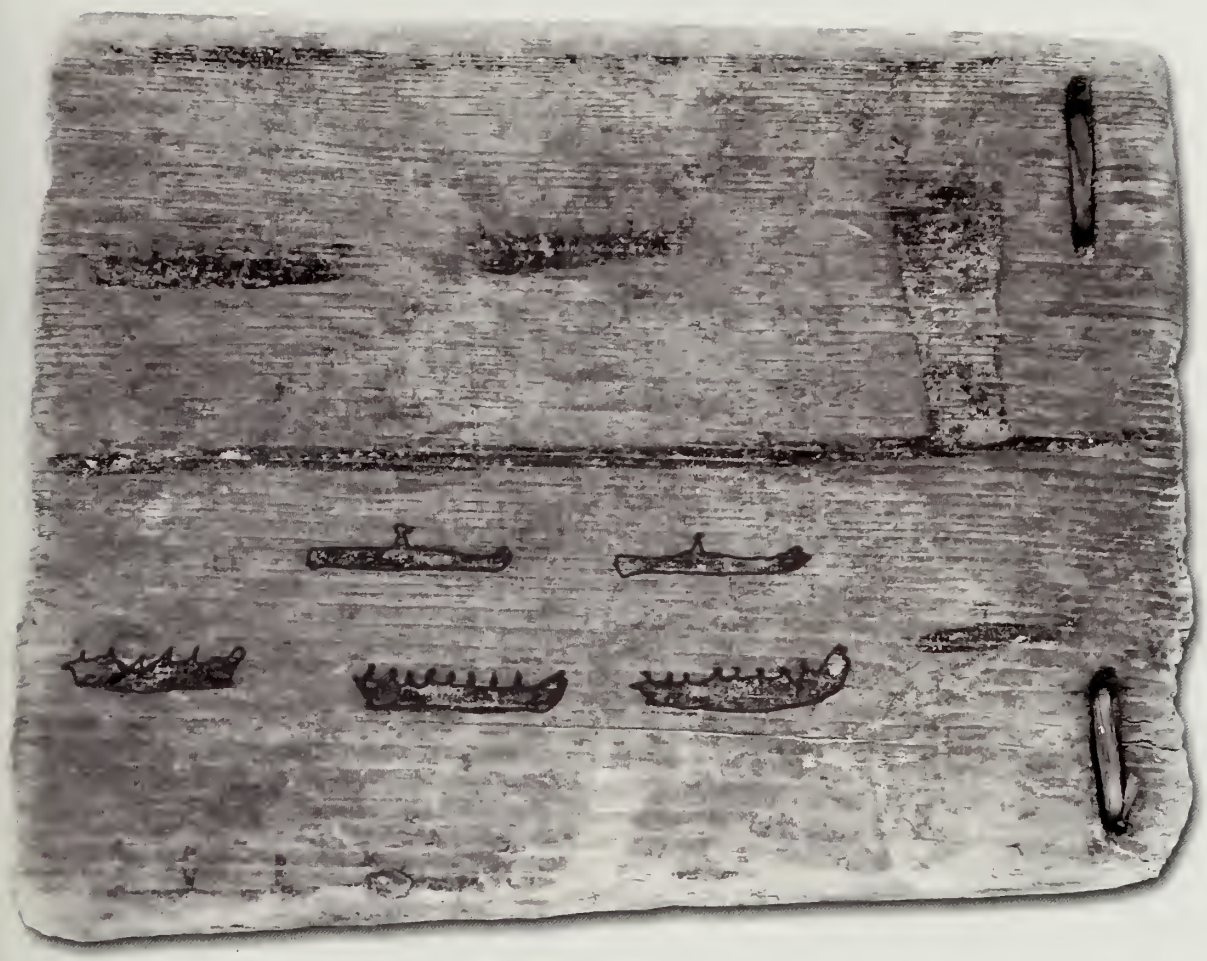
7.2 Paintings of a man and a woman from Bear Island, recorded by Frederica de Laguna. FROM FREDERICA DE LAGUNA, *THE ARCHAEOLOGY OF COOK INLET, ALASKA* (PHILADELPHIA: UNIVERSITY OF PENNSYLVANIA PRESS, 1934), FIG. 12. REPRODUCED WITH PERMISSION.

Prince William Sound is an intricate archipelago of fjords and islands, where de Laguna located five art sites during the 1930s. Melissa Baird subsequently visited the sites again in 2005, finding that the art, already much faded in de Laguna's day, was now barely visible even when artificial light came into play. This may imply that the art is relatively recent, perhaps no more than 300 years old or so. The most important site, Site 12, is a shell midden and burial site located in a rock shelter on an island. The pictographs here are all about 6 feet (1.8 m) above the floor. At the western end of the cave lies a group of paintings that represent a human face, a jumping whale, and a horizontal

7.3 Blackfish whales (orcas) and conventionalized animals recorded by Frederica de Laguna at Sadie Cove, Prince William Sound. COURTESY OF JEANNE SCHAAF

row of circles between two parallel lines. The human face is unique, with two eyes and a heavy brow (thought by some to be a graphic pun for a whale's tail) connected to the nose. The mouth is detached, the entire image being strikingly similar to petroglyphs from Cape Alitak on Kodiak Island. Lydia Black describes similar anthropomorphic faces on Alutiiq "battle-hatchets," but similar images don't occur at the Lake Clark sites. Above a recess where burials once lay, an elaborate anthropomorphic symbol depicted an ovoid torso without arms or legs. An oval eye between two horizontal lines on the torso recalls Northwest Coast art motifs. The figure has a small detached head wearing either a headdress or a coiffed hairstyle.

Site 13 is a mile (1.6 km) away, a rock shelter close to the high-tide mark. Here, the art once again includes human-like figures, including a human face like that from Site 12. The most complete pictographs are high on a ledge, a group of three human figures with slender bodies and "amorphous" heads, perhaps painted later, perhaps placed so that they stand out, conceivably marking the place as a location used by a specific group. There are two boats here, one an *angyaq* with five crew members, the other a kayak-like craft with three crew members. Site 59, also on an island, is



7.4 Wooden box panel painted with people traveling in boats from the Karluk One site, Kodiak Island.
PHOTOGRAPH BY SVEN HAAKANSON, JR. ALUTIIQ MUSEUM AND ARCHAEOLOGICAL REPOSITORY, KONIAG, INC. COLLECTION

said to have yielded seven mummies seated with their backs against the rock face of the shelter in 1902. A seal with an oblong body and flippers and other much faded images lay above where the burials sat. The artists painted two boats, both *angyat*, one with seven or eight crew members, high on the exposed rock face away from the shelter.

There are similarities between the Cook Inlet and Prince William Sound art, including a common use of red ocher for painting, but there are striking differences in the treatment of human images. Those from the Cook Inlet sites lack facial features, while those from Prince William Sound sometimes show eyes and other characteristics, which link them to Alutiiq art traditions from Kodiak. Perhaps, theorizes Baird, the inclusion of facial features was a sign of rank, for we know that the Alutiiqs commemorated social status with clothing such as elaborate parkas and with strands of beads dangling from faces, also with bodily decoration. Most striking of all, most pictograph sites in Prince William Sound were burial places, but the associations between the human remains and the pictographs are not well established.

Many years ago, de Laguna also observed the striking similarities between the pictographs from both regions, as well as the major differences in the treatment of human figures. These similarities and differences are hardly surprising, for cultural boundaries throughout the entire region were

fluid and changing constantly. There was a steady flow of trade and frequent warfare, which made for regular contacts between the mainland and Kodiak, and with northern Northwest Coast groups such as the Tlingit.

What about longer-distance analogies? So little is known about Alaskan rock art that it is difficult to generalize for an area where there were regular contacts between people living long distances from one another. Melissa Baird draws attention to parallels from as far away as Siberia. The large watercraft at Tuxedni and Clam Cove closely resemble images of boat petroglyphs along the Lower Amur River in Siberia, and especially boat pictures drawn on stone with mineral paint at the Pegtymel' site near Chutotka, in extreme northeastern Siberia. The Russian archaeologist Nicolai Dikov argues that the Pegtymel' boats were Aleutian craft, on the grounds that one figure wore a typical Aleutian wooden hat with a long visor to protect his face from flying spray. Dikov theorized that the Siberian petroglyphs were earlier than the Cook Inlet sites, this before radiocarbon dates were obtained from them. An *angyaq* image from Tuxedni is also similar to that depicted in a war-party scene on a box from the Karluk One site on Kodiak Island, which is radiocarbon dated to A.D. 1400 and later.

One should not make too much of these seeming links, but they do reflect basic, common cultural and artistic traditions that extended over an enormous area of coastal Alaska and Siberia.

Artists as Shamans

The greatest challenge facing anyone interpreting any form of ancient art is deciphering the meaning of the images. A huge academic literature and vigorous controversy surround the quest for meaning, much of it centered on Late Ice Age paintings and engravings in western Europe, the Australian Aboriginal Dreamtime, and the San paintings of southern Africa. Closer to home, Smithsonian anthropologist John Harrington spent a lifetime recording the material culture and religious beliefs of the southern California Chumash. In all these art traditions, the shadowy presence of shamans hovers in the background.

More than half a world away, South African archaeologist David Lewis-Williams was the first to identify shamans as important players in the magnificent San hunter-gatherer rock art of southern Africa. He stumbled across the research notes of a nineteenth-century linguist, Wilhelm Bleek, who had recorded the dialects and oral traditions of San convicts working on the breakwaters of Capetown harbor during the 1870s. The men told him of shamans who induced trances not by ingesting psychotropic drugs but by intense concentration, prolonged rhythmic dancing, and hyperventilation. To achieve their ends, whether encouraging a successful hunt, bringing rain, or curing the sick, San shamans went into trances, during which they manipulated supernatural potency possessed by animals, among other things. By combining Bleek's records and his own observations of modern-day San in Botswana's Kalahari Desert, Lewis-Williams believes he can "read" some of the rich archive of San rock painting in southern Africa. Among other things, he points to figures with attenuated bodies apparently in states of altered consciousness, to dots associated with some of them that may portray the "boiling sensation" that explodes in one's head as supernatural power rises up the spine.

Lewis-Williams' rock-art theories come from a belief that San paintings are visual representations of people's back-and-forth thought patterns—thoughts of the mind in both conscious and unconscious states. This talented archaeologist has spent years researching altered states of consciousness. His research has attracted wide attention, to the point that shamanism has become a standardized response to nearly all rock paintings. This is, of course, a gross simplification, for, like inscriptions, art was created for many purposes, many of

them having no connections with shamanistic rituals. Lewis-Williams himself has worked with experts on altered states of consciousness, also with Jean Clottes, a leading expert on Late Ice Age art in French caves, where, they are convinced, shamanism was an integral part of the rituals associated with the art.

Lewis-Williams' theories have attracted surging controversy, in part a reaction to the assumption that all rock art was connected with shamans. But there can be little doubt that much Native American rock art is indeed connected with shamanism. For example, John Harrington's Chumash informants told him how shapes on rock shelter walls such as circles, ladders, and zigzags had meanings to the beholder. For instance, zigzags and diamond-chain patterns depicted a sidewinder rattlesnake moving in the sand or the scales on its back. Few people knew the secret meanings of the paintings, which passed by word-of-mouth from one generation to the next. Oral traditions preserved by Harrington and others document the close involvement of shamans in this art tradition. The Chumash thought of their cosmos as being dominated by powerful supernatural forces in a state of flux. Among these people, the 'alchuklash, the astronomer-shaman, was the man who performed the correct rituals to ensure enough food for the coming year. The universe was a complex web of interactions between humans and their spiritual adversaries, always unpredictable, always dangerous.

Thousands of miles separate the Chumash and other California groups from the people of the Cook Inlet and Kodiak Island, but here, also, the shaman was an important member of society. Tuxedni and Clam Cove depict human figures, canoes, *angyat*, and, apparently, whales. We know from the anthropologist Kaj Birket-Smith that the Alutiiqs painted animals on rocks in secret places as part of whaling ceremonies. We also know that relationships between animals and humans were an integral part of many societies in the Lake Clark region. The Alutiiq word for shaman translates as a shaman who hunts whales. Ethnographic accounts tell us that many whalers were also shamans. Chumash shamans performed rituals to guarantee food in a challenging, unpredictable environment. By the same token, Alutiiq whale hunters invoked their supernatural powers as they performed secret rites in remote painted shelters to ensure the success of the hunt.

8

The Dena'ina

> "A young man was going around in a skin boat, and he came into a cove somewhere. Out in the water there were killer whales. He watched them dive. And they looked like dogs that surfaced from the water. When they came near the shore, they dove down, and then humans came out of the water. They went out into the woods . . . ."

Peter Kalifornsky was one of the last Dena'ina storytellers in the indigenous language, and one of the few who set down ancient tales in writing. He wrote, among other things, of the close relationship between the Dena'ina and their prey, about the careful way in which a hunter would deposit the butchered bones of his quarry in one place, in a lake or in the ocean, or even burn them. This would ensure that the animals were reborn.

The Frontier Shifts

Up to about A.D. 1100, archaeological sites on the Pacific coast and in the interior yield artifacts that are very different from one another, reflecting different cultural groups. By now, however, there was more interaction across the Alaska Range, reflecting, perhaps, movements in summer to interior camps near productive salmon runs. As we have seen, the frontier between the maritime Alutiiqs and their ancestors and the Dena'ina of the interior was a fluid one that rarely stayed long in one place. The ever-changing ebb and flow of trade and warfare, of transitory alliances and shifting food supplies, affected everyone, whether sea-mammal hunter, salmon fisher, caribou hunter, or plant collector. About a thousand years ago, a more lasting shift brought Dena'ina groups from the interior and the Upper Inlet to Kachemak Bay on the Kenai and to the shores of Lake Clark Park.

We know from excavations in Kachemak Bay that the maritime groups characteristic of earlier times there disappeared or withdrew by or before about A.D. 1000—the exact date is still uncertain. Artifacts associated with the Athapaskan-speaking Dena'ina now appear in the bay, made by people who had spread southward down the Cook Inlet. In the longer term, the shift may have resulted not from conquest or warfare, but from climate change. Conditions were warmer around A.D. 1100, making the bay a less desirable place for maritime hunters. Conditions were cooler and wetter over much of the Northern Hemisphere during the so-called Little Ice Age that followed, a period between about 1200 and 1860. Between 1440 and 1710, for example, local glaciers advanced significantly. These cooler circumstances may have made Kachemak Bay a less desirable place for its small maritime population, who were vulnerable to food shortages caused by

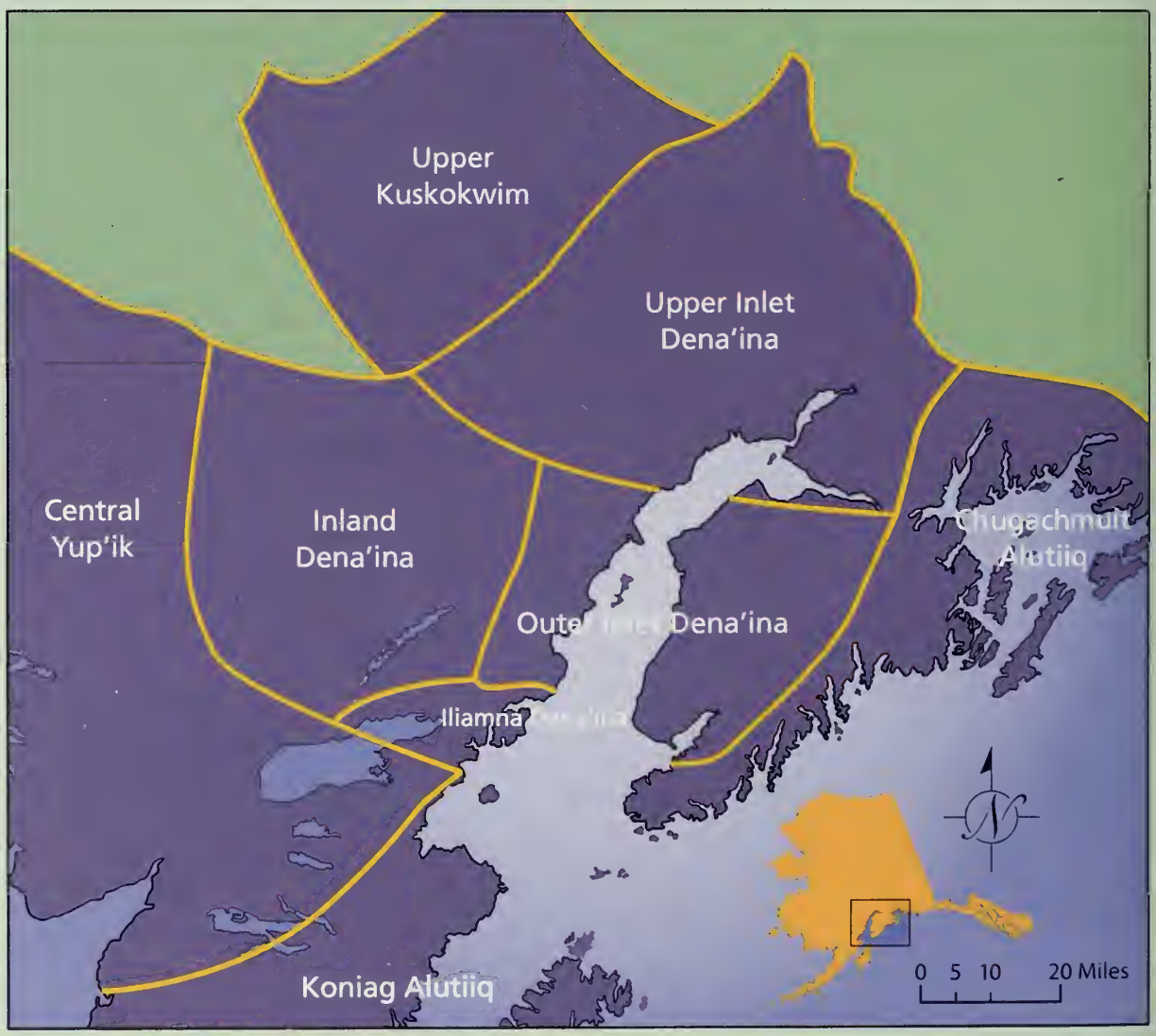
8.1 Dena'ina glove cuffs with quillwork and otter trim collected by Adolf Etholen and presented to the National Museum of Finland in 1846. REPRODUCED WITH THE PERMISSION OF THE NATIONAL BOARD OF ANTIQUITIES OF FINLAND, HELSINKI.

ice forming in shallow water. Overexploitation of fish and sea mammals, along with warfare, may also have been factors in the changeover.

"The People"

The Dena'ina were people of the land, not the sea. They were consummate terrestrial hunters, whose skills and whose attitudes toward animals came from far back in history. For thousands of years, they dwelt near the lakes and rivers of Lake Clark Park, and far inland, subsisting mainly off caribou, moose, and mountain sheep. In places like Iliamna Lake, they also harvested spring salmon runs. Dena'ina groups occupied and visited the coastline for the seven centuries before European contact and still do so today.

The Dena'ina—the word means "the people"—speak an Athapaskan language with several dialects distantly related to both Eyak and Tlingit. At European contact in the eighteenth century, their homeland extended from Seldovia in Kachemak Bay on the Kenai Peninsula, north to the head of the Susitna River, south to Kamishak Bay, and inland to the Stony River watershed. There were larger social groups, regional bands, who shared common



8.2 Distribution of Dena'ina groups. AFTER BORASS. 2007 P 31

foraging and fishing territories. Two such bands occupied western Cook Inlet. The Qezdaghdna ("Point People") lived south of Trading Bay, with a primary settlement at Kustatan. These people spoke the Outer Inlet dialect of the Dena'ina language, which was also used on the other shore, on the Kenai Peninsula. This Outer Inlet dialect was closely related to the Iliamna one, spoken around the lake of that name, also to the Inland dialect of Nondalton, Kijik, and other villages near Lake Clark. The Tubughna ("Beach People") lived north of Trading Bay, with their major settlement at Tyonek, recently the subject of a major ethnographic study. They spoke a more diverse Upper Inlet dialect and were linked to other Dena'ina groups in the Susitna River and further up the Inlet. Not that the boundaries between the groups were rigidly defined—far from it. There was constant interaction and movement between them. The Dena'ina were frequently on the move, living in harsh, rugged interior terrain, except on the coast, where they dwelt in more sedentary settlements. At European contact, there were between 3,000 and 5,000 Dena'ina, most of them apparently living near the coast or at strategic lakeside and riverside locations in the interior. (Russian visitors named them Tanaina or Tenaina, also Kennitze, but Dena'ina is used today, this being the name used by the people themselves.)

In Chapter 2, we described the ancient microblade traditions of Paleoarctic times, dating back to as far as 10,000 B.C., if not earlier, and an economical stone technology, which is thought to be associated with bison- and caribou-hunting peoples living away from the coasts. This tradition endured in various forms over a very long time, perhaps until as late as 500 B.C. in some places, over

8.3 Northern Archaic points from the northern Alaska Peninsula. Points average between 1.5 to 2.3 inches (4 to 6 cm) in length. COURTESY OF DON DUMOND, UNIVERSITY OF OREGON

an enormous area of the sub-arctic and down the Northwest Coast, at least as far south as the Queen Charlotte Islands of British Columbia. Like so many other mobile hunter-gatherer societies, those who fabricated microblades have left almost nothing behind them for archaeologists to study, except for the minutiae of their stone-tool manufacture.

Microblade technology spread into the Aleutians and on to Kodiak, where it survived alongside weapons with ground slate blades, which were then flaked to sharpen them, after about 2500 B.C. But light weaponry persisted in the interior right into modern times, much of it armed with bone points. Unfortunately, we know almost nothing of these cultural traditions, marked as they are by different stone projectile forms, for preservation conditions militate against the preservation of hunting weapons made of antler, bone, and ivory.

In about 2500 B.C., groups who used distinctive projectile points with corner and side notches appeared in the Park, a tradition known archaeologically as the "Northern Archaic Tradition." Northern Archaic sites occur over an enormous area of Alaska, from sea level to higher elevations where hunters could watch for game in the surrounding landscape. The Northern Archaic population of Lake Clark was sparse and is as yet little known. But these elusive people are of considerable interest, for there is reason to believe that they may be proto-Athapaskan speakers, and thus ancestors of the Dena'ina, among other Athapaskans.

8.4 Ancient movements into Dena'ina territory, based on oral tradition, mythology, and linguistic information. AFTER BORAAS 2007

8.5 "A Woman of Prince William Sound." This painting by John Webber, artist with Captain Cook, 1778, shows the distinctive ornamentation common among Native groups in the Cook Inlet area at European contact.
CATALOGUE NO. 2000.029.001, NATIONAL ANTHROPOLOGICAL ARCHIVES.

Priscilla Russell Kari, who studied the plant knowledge of the Dena'ina, marshaled archaeological, ethnographic, and linguistic evidence to argue that the ancestors of the Dena'ina migrated from Siberia to Alaska and that their successors were still expanding their hunting territories right up to European contact. As far as the Cook Inlet is concerned, the first groups arrived in the Upper Inlet, with a second migration taking people from near Merrill Pass toward the water, then down to Kustatan in the West Forelands area of the western shore. Subsequently, the Dena'ina crossed the Inlet and settled around Kachemak Bay, perhaps about a thousand years ago.

The Dena'ina in Cook Inlet were unique among Athapaskan speakers in that they settled along a coastline and exploited maritime resources. Exactly when they did so is unknown, for no archaeological sites document their presence before A.D. 1000. How close the relations were between Alutiiqs and Dena'ina before then is a mystery, but the Athapaskans rarely borrowed place names, or apparently vocabulary, from the Alutiiqs, so the relationship may have been a distant and at best sporadic one. We do know, however, that the Dena'ina adopted some maritime technology, such as harpoons, from their neighbors, as well as kayaks and open skin boats.

With virtually no archaeological evidence to work with, our primary sources of information on the Dena'ina are ethnographic and historical. The earliest source of information on them comes from Baron F. P. Wrangel, who was Chief Manager of the

Russian American Company from 1831 to 1836. He wrote an account of Dena'ina living on the Kenai Peninsula, at a time when the people were resisting Russian incursions. Another early visitor estimated that there were 3,000 of them in 1805, but the population declined catastrophically during the nineteenth century, largely as a result of a smallpox epidemic in 1838. Some Dena'ina tried to avoid Russian influence by moving into the interior (see Chapter 9).

Anthropologist Cornelius Osgood studied several Dena'ina communities from 1931 to 1934. His study offers an incomplete but very welcome portrait of a much-changed lifeway. Osgood used a patchwork of informants, who remembered something of earlier times and recalled oral traditions. He wrote, perforce, a generalized account of their society. Along the coast, most traditional culture had already vanished by his time. Much more recently, Ronald Stanek, James Fall, and David Holen completed an ethnographic study of the Dena'ina of the western Cook Inlet, largely based on Tyonek, as part of an assessment for the Lake Clark National Park and Preserve. In 2006 they published their research, which benefited from close collaboration with the Dena'ina themselves.

Of the clothing and appearance of the Dena'ina of ancient times, we know little. According to Osgood, the people wore one-piece caribou or sheepskin garments covered with shirts or hooded parkas. Everyone used boots, the soles being made of bear or beluga skin, which was said to last for a year. Coastal groups used waterproof wading boots and bear-intestine or salmon-skin over-garments in wet weather or when paddling kayaks. They would display their wealth by wearing beads, including dentalium shells imported from far to the south, from the Vancouver Island region. Red and black lines painted on their faces apparently showed clan [illegible] people around Iliamna Lake tattooed [illegible] on either corner of their mouths.

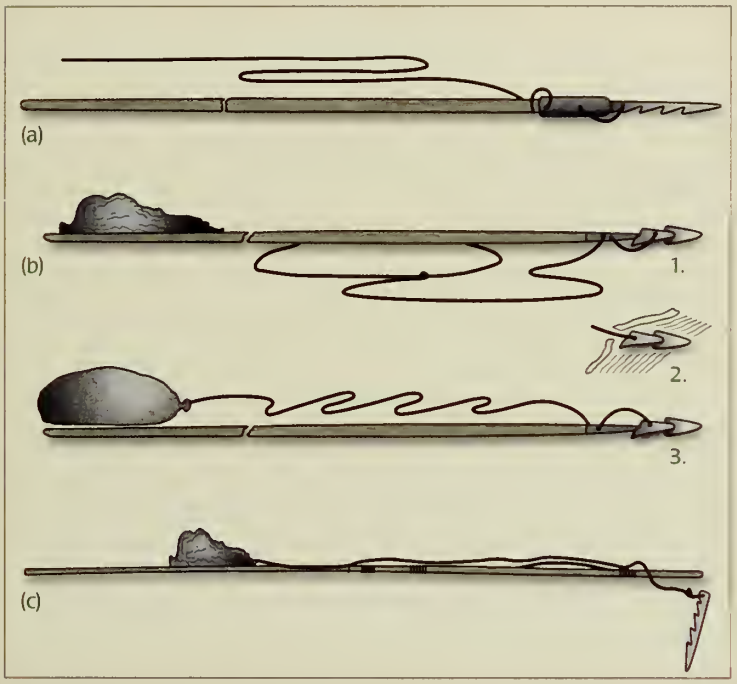
Fish, Game, and Plants

Like other Athapaskan-speakers, the Dena'ina depended mainly on fish and game. Even in good years, their food supply was unpredictable. But the Cook Inlet Dena'ina were unique among such peoples in that they also took sea mammals. Away from the coast, temperatures were much lower and food supplies even less predictable than close to Lakes Cook and Iliamna and the coast.

Coastal groups seem to have lived in larger communities and to have traveled during the spring, summer, and fall to gather plant foods or to harvest salmon runs. The annual round really began in April, with the arrival of migratory waterfowl in Nut'aq'in'u, "Goose Month." The people snared enormous numbers, or shot them with blunt-ended arrows in marshes, swamps, and at river mouths. This was also when they speared and trapped beavers and set fish traps for trout.

8.6 Drying salmon in Fedora Constantine's smoke house at Tyonek o the Upper Cook Inlet. COURTESY OF ALASKA DEPARTMENT OF FISH AND GAME. SUBSISTENCE DIVISION.

Spring was also the time for salmon runs. An enormous run brought salmon from Bristol Bay into Iliamna Lake each spring, while the Kenai River was also a major salmon producer. Near Iliamna, the salmon were caught by the damming of small



creeks and rivers with log weirs set in a "V" facing upstream, which forced the fish into a narrow trap. A man stood in the trap with a dip net, netting them two or three at a time. Another man trapped the salmon; a third cast them into a canoe. Another ingenious method used a dragnet of alder poles tied together with spruce root lines. Three men, one at each end, one in the middle, pushed the fish into shallow water, where others killed them with wooden clubs. Fish spears also came into play, but were said to be slower and required a nice aim. Once the catch was ashore, women cleaned the fish, while children washed them before the carcasses were hung up to dry.

8.7 Dena'ina hunting weapons: (a) A barbed fish spear with detachable foreshaft and line. (b) 1. A toggle-pointed harpoon with bladder attached, used for hunting belugas and sea lions. 2. A toggle point in the body of a sea mammal. 3. A toggle-pointed harpoon with free-floating bladder used against belugas. (c) A simple pointed harpoon with bladder attached, used against porpoises, otters, seals, and sea otters. AFTER CORNELIUS OSGOOD, 1937.

8.8 A large hand-forged steel spear head, used by Trefon Balluta of Telequana Lake. This spear head, about 15 inches (38 cm) long, 2.4 inches (6.1 cm) wide, and 0.25 inch (0.6 cm) thick, would have been mounted on a birch shaft about 12 feet (3.7 m) long. CAPTION BY JAMES KARI, PHOTOGRAPH BY WALTER VANHORN. COOK INLET HISTORICAL SOCIETY COLLECTION AT THE ANCHORAGE MUSEUM OF HISTORY AND ART.

8.9 Caribou swimming, a favorite quarry for Dena'ina hunters. NATIONAL PARK SERVICE

With salmon runs occupying only a few weeks of the year, the people obviously caught many more fish than they could possibly eat fresh. Most of the catch was dried and then carefully stored for later use. After gutting the fish, cutting off their heads, and butterflying them, the women would hang them in the sun and wind to dry for a day or so. Then they would move them to a smoke house, where they would hang the carcasses above an alder wood fire for up to a week, until the fish no longer dripped.

Both the prehistoric and historic Dena'ina of the area targeted what they called "red fish," a spawning red or silver salmon that ran late in their area. They dried them and then stored them in underground pits, which were brought into use so late in the year that the contents froze. This made further processing unnecessary. These spawning fish were (and still are) much valued because their flesh is not very oily, which means that they preserve better than other salmon.

Other fish such as arctic char formed part of the diet, as did shellfish for some groups, while eulachon caught with dip nets provided much-needed oil. Salmon were, however, the primary catch, and in dried form were an important winter staple for those fortunate enough to have access to salmon runs. Some groups would remove clams from their shells, then hang them on spruce root lines to dry. They would then store them in a dry seal stomach sealed with grease and keep them for winter use.

During spring and summer, hunters in kayaks pursued harbor seals with clubs and harpoons. They also harpooned beluga whales from spearing platforms built of trees embedded upside down in the mudflats, rendering the fat into oil and drying the meat for winter use and to trade for fur.

8.10 Spring beaver-trapping camp near Kulik Lake, Katmai, early twentieth century. PHOTOGRAPH COURTESY OF REXFORD A. PETERSON NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION NO. H-1918.

Hunting was a constant activity, carried out for the most part by small parties, often including an older man who would stay in camp and prepare food. The older man's experience was much valued, for he was an important source of hunting lore. Each man carried a bow and arrow, also a spear, up to 5.5 feet (1.7 m) long if used in the open, shorter for forest hunts. The success of the chase depended on an intimate knowledge of the quarry's habits and also on superlative stalking expertise, which allowed the hunter to get within striking distance of the animal. According to Osgood, the hunter would use his bow to wound the animal, preferably in the heart, and then move in to dispatch it with his spear.

Caribou were common quarry and were often hunted with dogs, which abounded among Dena'ina groups. The hunters used dogs to drive animals past their hunting blinds, so they could shoot the beasts down as they passed. This was an especially effective tactic when harvesting large numbers of caribou at important gathering spots. Sometimes, the hunting party would spear individual animals while they were swimming. Nothing from the carcass was wasted. Even the noses were boiled, then eaten cold or hot.

Moose were an opportunistic quarry, usually taken near lakes and rivers during the bad mosquito season or in deep snow. The best days for the hunt were those with a strong wind, when the hunter would stalk resting animals from downwind and try to kill them as they rose to their feet. Bears abounded and were sometimes hunted with spears, which were thrust into the jugular vein as the animal stood in defiance. The hunter then twisted the spear and held the bear away with the shaft. Often, bear hunters would wait until the bears hibernated, then tease them awake in their lairs and kill them

as they emerged half asleep. Bear fat was cut into slabs and then rendered by boiling before being stored in dried stomachs for winter use.

Small animals were a staple of the Dena'ina diet—the ubiquitous rabbit, snared by the dozen, and porcupines, impaled when sitting in trees or knocked to the ground and clubbed. Beavers could be taken at any season by breaking into their dens and then using dogs to discover the exits. As the beavers emerged, they were gaffed and then clubbed between the shoulders, so as not to spoil the head. The hunters used endless ingenuity to snare or kill all kinds of animals, among them lynxes, prized for their fur.

Plant foods, *hdenlyahi,* "that which grows," were of great importance during the spring and summer growing season, but were collected year-round. Most food gathering fell to the women, who used birch-bark or wooden containers. They used short, sharpened digging sticks or caribou antlers to dig up roots. Many plant foods, if not boiled or fried for immediate consumption, kept well when stored in oil or grease and kept in a cool, dry place.

Like all hunter-gatherers, the Dena'ina had an intimate knowledge of their environment and of the edible and medicinal plants available at different times of the year. Just as they did with animals, the people had a very personal relationship with plants. They addressed them in a respectful way (if possible using the correct words), avoided waste, and gathered unused parts carefully, both out of respect and to create food piles for animals. According to Priscilla Kari, who studied Dena'ina plant lore, they believed that animals taught people what edible foods to use. The respectful treatment of plants is remarkably similar to the general values that surrounded animals.

The major collecting season began with sea weeds in April and May, then with the first edible greens and wild potatoes. In May and June, the people would peel birch and spruce bark from trees for their canoes and containers, and for other construction purposes. By July, attention turned to underground plants of all kinds, with a particular focus on medical plants in August. Late summer and early fall were the time when thatching grass was harvested. Red salmon berries were a staple in July and August, as were other forms of wild fruit such as blackberries and cranberries. Fern roots were an important food in the Kenai and elsewhere and could be found even when buried under snow.

8.11 Ruth Koktelash picking blueberries near Nondalton, circa 1975. PHOTO PROVIDED TO THE NATIONAL PARK SERVICE COURTESY OF FLORENCE HICKS AND DORIS HAGEDORN

Since many people spent their lives on the move, they placed considerable importance on foods that could be consumed on the march or while hunting, which accounted for the importance of dried meat (including dried seal meat) and fish.

8.12 Birch-bark basket collected by Rupert Axley Moon, a teacher at Susitna Station in 1916-1917. A GIFT TO THE ANCHORAGE MUSEUM FROM CHARLES C. MOON AND FAMILY. NO. 1997.04B.001.

Winter and Summer

The rhythm of Athapaskan life along the coast and close inshore revolved around the winter and summer seasons. During the long winter months, the people gathered in semi-subterranean winter dwellings *(niclhil)*. Some in the Kenai were up to 39 feet (12 m) long, but most were much smaller. The surviving winter-house foundations at Clam Cove, already mentioned, lie at the back of the beach, well clear of any winter storm activity, but there is little to see except the overgrown depressions of houses once built into the ground.

8.13 An unidentified woman stands in front of a partially constructed Dena'ina winter house on the Newhalen Portage between present-day Iliamna and the middle Newhalen River in 1908. Note the upright forked birch support and the skin-bag cache hanging from it. PHOTOGRAPH BY A. S. TULLOCH, CAPTION BY JAMES KARI. NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION NO. H-121.

Construction methods varied, but once the builders had dug out the foundation and smoothed the walls, they would erect stout wooden uprights at the corners. Then they laid horizontal logs to a height of about 5 feet (1.5 m) above the ground, each caulked tightly with moss and lashed to the corner posts with spruce root. Stout uprights down the middle of the house supported the roof of poles and layers of bark, with a large hole in the center that allowed smoke to escape. A shedlike entryway led from the door to the open air as a way of keeping heat in and snow out. Finally, the builders thatched the exterior walls with dry grass gathered in fall, before piling earth around the structure to render it as windproof as possible. Inside, a central hearth burnt on a bed of sand surrounded by a wooden frame.

The people moved away from winter houses in summer, when salmon fishing became all-important. The ice breakup and general thaw of spring tended to flood semi-subterranean houses, so it was a good time to move. Their summer dwellings lay close to important fishing places, once again excavated partly into the ground. Each house was up to 20 feet (6 m) long. They were less heavily constructed with smaller smoke holes, one reason being, apparently, that the dense smoke inside deterred the clouds of mosquitoes that plagued the summer months. The inhabitants also smoked their salmon catches in the same structures.

Mobility was the key to survival in the much colder interior, where hunters relied on simple lean-to shelters for temporary stays of one or two nights. They would simply erect two notched poles with a cross-piece, lash them in place with root lines, then cover them with boughs and thatch or with skins specially cut for the purpose. Lean-tos were not always waterproof, but they did allow a hunter to sleep with his head at the back of the shelter. We are told that by simply raising his head, a hunter could spot an animal and even shoot it without getting up. Winter shelters were more substantial with fully waterproof coverings and even space for drying meat.

Mobility and storage—these two words summarize Dena'ina existence. In the interior, people were constantly on the move, very often on foot, which meant that they carried all their possessions, their weaponry, and their food with them. Near the coast or by major fishing grounds, much depended on watercraft. In the interior, the Dena'ina apparently made use of birch-bark canoes, but on the Pacific they acquired kayaks and probably angyat from the Alutiiqs, or at least learned how to construct them for themselves. Cornelius Osgood's informants stated that the men fabricated the frames, while the women used sealskins for the coverings. The Dena'ina paddled their tailor-made kayaks by kneeling on a grass mat and a caribou skin, a technique they also used in their birch-bark canoes.

The coastal Dena'ina traded over long distances. Angyat from whaling communities on the lower Kenai Peninsula and perhaps from Kodiak would regularly arrive to trade chunks of whale meat set in baskets of oil, the approaching crews raising their paddles as a sign of peace. The local chief would give the visitors a feast before trading began. The Kodiak visitors came in quest of caribou antlers for tools, ivory, and furs from such animals as lynxes and martens, for only a limited variety of furs could be obtained in their homeland. The Dena'ina living around Iliamna Lake traded sealskins and sinew lines to their neighbors in Bristol Bay in exchange for moose and wolverine skins.

A vast network of trails passed through valleys and mountain defiles in the interior. People traveled widely, perhaps two or three men carrying game meat, or even a solitary traveler visiting relatives. Basic commodities like furs, seal meat, and oil passed along these ancient paths, some of which are now hiking trails in the Park. A Census Document from the Eleventh Census of 1890

8.14 Newhalen Falls, where a major trail used a portage. PHOTOGRAPH BY JOHN BRANSON, NATIONAL PARK SERVICE.

reported that a chief living by Lake Clark had traveled as far afield as the Upper Inlet to trade and hunt, a journey that may well have been relatively commonplace in earlier times when interior groups exploited enormous hunting territories, simply because they had to.

Chiefs and Shamans

Dena'ina society was a composite of about fifteen matrilineal clans, with descent through the female line, and was divided into moieties (halves). Everyone married a member of the other moiety. Each moiety was associated with a color, one with blue, the other with red, while each clan was named. One of the red moiety clans was intriguingly named "Red Ochre Clan." There was social ranking, too, perhaps less elaborate than that of their maritime neighbors.

Each winter house was home to people related by kin ties. A *queshqa*, or leader, led each household group and was responsible for organizing hunting and fishing parties and for managing the resulting harvests. He was "master of the cache." Dena'ina leaders came from wealthier families and their relatives. They acquired their rank by clan membership, but the only indications of their status were strings of beads. They attracted followers by their clan affiliations and leadership abilities, and were responsible for entertaining visitors, who often brought valuable information about game and other foods. The chiefs also spent much time passing traditional lore and environmental knowledge from one generation to the next. As with every hunter-gatherer society, success in the food quest depended on intelligence gathered by contacts with neighboring bands, by individual hunters, and between families. Apprenticeship and mentoring—to use modern-day terms—lay at the core of Dena'ina life.

Like other hunter-gatherer groups, the Dena'ina lived in a world where the living and spiritual worlds were as one. A cosmos of spirit animals and supernatural forces surrounded them, part of a living environment where dreams and shamanistic trances played important roles in daily life. All natural objects, living or inanimate, had powers equal to, or even exceeding, those of humans. The natural world was friendly yet hazardous, a place where sudden, unpredictable hazards like avalanches, earthquakes, floods, and other phenomena could destroy one without warning. Like other hunting peoples, the Dena'ina had a close and respectful relationship with their prey, which were also spiritual beings.

Male and female shamans, *el'egen*, were prominent in Dena'ina society, as they were throughout ancient Alaska. They were the storytellers, the intermediaries between the living and supernatural worlds. Their power came from compelling public performances and their curing skills, also from dreams. Many Dena'ina shamans were wealthy individuals, often chiefs, who used elaborate paraphernalia. They wore fur parkas like everyone else, but theirs were covered with rattles made of claws and beaks. Their paraphernalia included necklaces and ornaments made of the claws, teeth, or feathers of the animal with which they had a special relationship. Shamans made use of masks that depicted the animal from which they drew their power—perhaps a bear, a caribou, or a raven. They would use ceremonial sticks carved with their spirit animal during curing rituals. Drums and rattles provided sound tracks for their rituals and tales.

During long winter nights, storytelling consumed much of a shaman's time, long hours when important knowledge passed from one generation to the next. Winter was the time of visits, of dances and singing. "They seem to regard dancing as a

natural physical and emotional experience," wrote Cornelius Osgood. "Both sexes participate and individuals of all ages, from the toddling youngsters to the white-haired wrinkled fathers."

Mapping the Land

The Athapaskan bands that dwelt in the Lake Clark region lived much of their lives in isolation, but had common ties of language and culture with people living over a wide area. Theirs was a culture based on an encyclopedic knowledge of vast tracts of rugged territory, where geography was defined by carefully memorized place names that had been in use for many generations. Many such names were descriptive, reflecting an annual round during which people moved through their hunting territories in search of food. For example, a ridge near Twin Peaks in the Chugach Mountains was called *Bentulik'elashi*, "the one that dogs are driven up," a reference to the use of dogs for hunting Dall sheep at higher altitudes. Other names commemorated places where bands cached dried fish or gathered roots, or a "lake where the game trail goes into the water," for example. Some groups erected pole platforms over the mudflats across from the modern city of Anchorage, where they caught salmon with dip nets, a place called *Tak'at*, "dip net platform." The linguist James Kari tells of a local band's name for Polly Creek at the mouth of the Tuxedni Estuary—*Talin Ch'iltant Ht'ana*, "where we found a whale." Perhaps this reflects a folk memory of a hunt or of an encounter between Dena'ina and Alutiiq whale hunters, or it may be a memory of someone coming across the paintings far up the river, but we cannot take this place name too literally.

Only a very small number of people are still Dena'ina speakers, so many place names are lost. Fortunately, linguist James Kari of the Alaska Native Language Center, and later James Fall, and others, collected place names and oral traditions from native speakers in the 1970s. They recorded information from a Dena'ina named Shem Pete, who was born in about 1896 and spent much of his life traveling by boat and on foot. Shem Pete recorded over 600 indigenous place names, mainly from the Upper Cook Inlet, many of them unchanged for generations, even centuries. Many retain a clear meaning to this day. Kari has worked with many Dena'ina elders and to date, they have compiled and mapped over 1900 Dena'ina place names. The importance the Dena'ina gave place names epitomizes a life way defined by geographical and environmental knowledge that allowed them to survive in a harsh and unpredictable environment.

Just like the Alutiiqs, the Dena'ina used hunting and gathering methods that remained virtually unchanged over thousands of years. Groups formed and fractured; people died in hunting accidents or quarreled with one another. A sudden raid might decimate a coastal settlement. New hunting technologies or watercraft might make the food quest more effective. However, for all these shifts, the basic dynamics of life away from the coast changed but little and would have survived indefinitely, had it not been for the arrival of strangers in Cook Inlet in A.D. 1778, a momentous development described in the next chapter.

9

Contact

The white clouds first appear as lighter patches in the fog hovering above the water. The gloom ebbs and flows, but the clouds stay constant, grow slowly larger and more distinct. Close to shore, two *angyat* paddle slowly outside the breakers. Their owners gaze seaward at the white patches in puzzlement. Suddenly, the fog clears. The clouds become part of two large ships drifting, weathered sails billowing in the light breeze. Unsure of whether to approach or paddle for their lives, the crews steer cautiously for the slow-moving vessels. A man wearing a blue coat with shiny buttons and a three-sided hat looks down at them from the deck as they draw nearer. Unbeknownst to the paddlers, their lives will never be the same . . . .

Captain James Cook

In May 1778, the English navigator Captain James Cook sailed into what we now call Cook Inlet, searching for a western approach to the fabled Northwest Passage that was thought to offer passage between the Atlantic and the Pacific along the northern coasts of Canada. His two ships, *Discovery* and *Resolution*, had sailed northward from Nootka Sound on the west coast of Vancouver Island before a strong gale. On May 1, Cook sighted land, a broken coast with snow-clad mountains. He had no local knowledge to go on, merely some vague reports from Vitus Bering and other Russian explorers who had probed northern waters thirty years before, reporting an abundance of sea otters and furs. The ships anchored off St. Elias (later Kayak) Island, 62 miles (98 km) southeast of the modern city of Cordova in Prince William Sound (first investigated by Bering). Cook then sailed into the inlet that now bears his name.

Cook found himself at a mouth of what appeared to be a large estuary. Searching as he was for a passage eastward, he sailed inshore in fog, and met two boatloads of Native Americans. The boats had wooden frameworks covered with skins—clearly *angyat*. The men wore skins, which Cook described as looking somewhat like English wagoners' smocks—an apt description of Dena'ina clothing. While repairing a leak in a sheltered anchorage (now Trading Bay), Cook encountered more locals, small in stature, thickset, and "fine jolly full fac'd fellows." They wore skin raiment, also slatted armor made of wooden slits fastened with sinew. The women tattoed their chins and cheeks, apparently to match the men's beards. Both men and women wore labrets, their faces painted red and black. Cook remarked that the people were different from the Nootka inhabitants of Vancouver Island, "both in their persons and their language." Cook's surgeon, William Anderson, recorded an eleven-word Athapaskan vocabulary that firmly identifies them as Dena'ina.

9.1 Chugach Alutiiq trading parties in kayaks and larger skin boats meet Captain Cook's *Endeavour* and *Discovery* in Snug Cove, Prince William Sound, 1778. ETCHING FROM A DRAWING BY JOHN WEBBER. CATALOGUE NO. 11 B0.71.1 NATIONAL ANTHROPOLOGICAL ARCHIVES. SMITHSONIAN INSTITUTION.

Several Dena'ina oral traditions preserve memories of their first meeting with Europeans. Simeon Chickalusion, a former chief of Kustatan and Tyonek, recorded the following:

> "[The ship] was like a giant bird with great white wings . . . . All the Tyonek men were very frightened and ran and hid in the woods, except one brave man. He paddled out in his baidarka to see what it was. The strange people on the boat traded him some of their clothes for what he was wearing. When the courageous native returned to the shore he was a hero to his people, and the costume he brought back with him [the uniform of an English sailor] was faithfully copied down through the years, to wear in ceremonial dances."

Another tradition tells how the people grabbed their weapons and prepared for war, but the visitors came in peace. The strangers buried a jar of coins and made a proclamation of ownership.

The English ships sailed carefully upstream through fast-moving tidal waters. After days of careful navigation, Cook was convinced he was traveling up a large river, congested with "very thick and muddy water, large trees, and all manner of dirt and rubbish." The country was low and almost treeless. The water shallowed, so the ships turned downstream into the Outer Inlet. There, the clouds parted for the first time in days. Cook had a clear view of the mountains and what is now called Mount Redoubt, "emitting a white smoke but no fire." James Cook spent sixteen days in what James King, a lieutenant on the Discovery, called "The Great River." Back in London, the Earl of Sandwich, the First Lord of the Admiralty, renamed it Cook River. Subsequently George Vancouver, after more

9.2 A much romanticized picture of a Russian outpost at Three Saints Harbor, Kodiak Island. ELDER E RASMUSON LIBRARY UNIVERSITY OF ALASKA FAIRBANKS

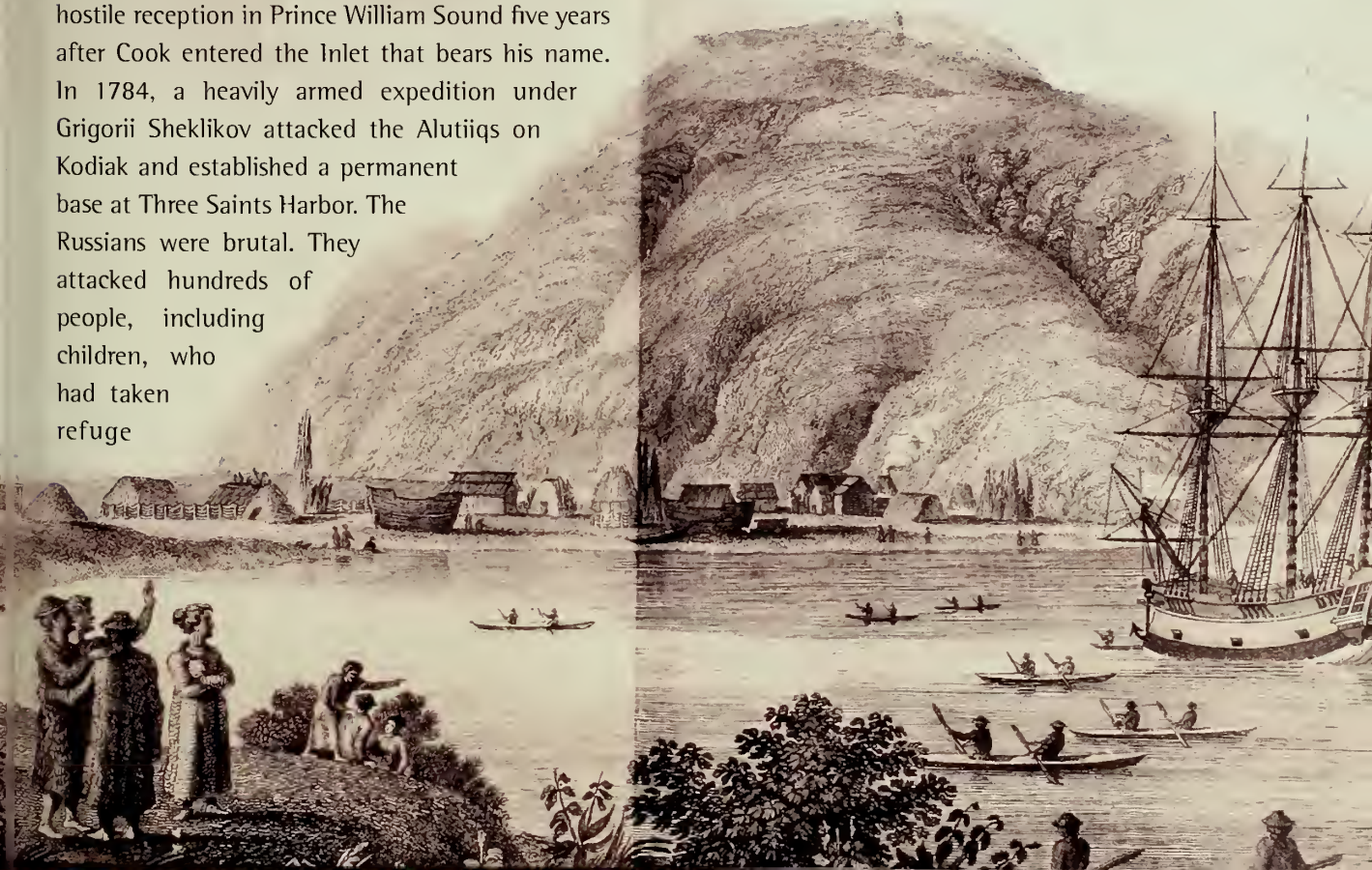
thorough exploration, changed the name to Cook Inlet in 1794, but he had minimal contact with the local people.

Cook was the first European to encounter the Dena'ina, but the encounter was not as surprising for them as it would have been in isolated places like Hawaii. Tales of sailors in large ships must have already reached Cook Inlet from trading partners to the southwest or on Kodiak Island. Some European iron artifacts and other trade goods seem to have circulated far and wide before anyone set their eyes on a foreigner. Exotic European diseases had probably also spread throughout local native communities after their introduction to the Aleutians.

Russian Fur Traders and the Alutiiqs

The Alutiiqs had been the first after the Aleuts to encounter ruthless Russian fur traders. In 1763–1764, Stepan Glotov visited Kodiak Island, his landing fiercely opposed as warriors attacked and tried to burn his ship. Eventually he was able to trade some sea-otter belts and fox furs for beads. Another expedition under Potap Zaikov received a hostile reception in Prince William Sound five years after Cook entered the Inlet that bears his name. In 1784, a heavily armed expedition under Grigorii Sheklikov attacked the Alutiiqs on Kodiak and established a permanent base at Three Saints Harbor. The Russians were brutal. They attacked hundreds of people, including children, who had taken refuge on a rock near Sitkalidik Island on the east coast of Kodiak, and massacred them. The newcomers forced local chiefs to surrender their children as hostages. Only a few people escaped in their kayaks.

Three Saints Harbor became the headquarters of a major fur trading operation that soon extended beyond Kodiak Island onto the Alaska Peninsula and into Cook Inlet and Prince William Sound. There was a trading post on the Kenai Peninsula by 1786. Forts, work stations, and small outposts soon extended across Alutiiq and Dena'ina territory, the latter at Lake Iliamna and on the Kenai, consolidated after fierce competition into a single Russian-American Company chartered by Czar Paul I in 1799. He took a third of the profits. The Company first headquartered in what is now the city of Kodiak, and later at Sitka in Southeast Alaska. The Russians forced Alutiiq men to join sea-otter hunting parties commanded by their own men. The hunting expeditions would start in the spring and last all summer. By 1810, as many as 500 kayaks took part in the hunt. Human life was of no importance. Hundreds of hunters perished at sea during the summer hunts.



9.3 "Natives of Prince William Sound," from James Cook, *Voyages around the World,* 1822 edition (London: J. Robins).
ATRIUM EXHIBIT A0867-15, ARCHIVES, ALASKA AND POLAR REGIONS COLLECTIONS, ELDER E. RASMUSON LIBRARY, UNIVERSITY OF ALASKA, FAIRBANKS.

The hunt did not stop at sea otters; the men also harvested whales and halibut as provisions for the Company, as well as birds and smaller animals. Women dried fish, sewed nets, and collected edible plants on a quota basis. All of this work was carried out for minimal reward, and affected all men between the ages of eighteen and fifty. The effects on local society were catastrophic, not only in terms of poverty, but also because there were not enough hunters left at home to acquire sufficient food for the winter months, or, by the same token, enough couples to create children. "Aleuts in all settlements in winter-time suffer great hunger," reported traveler Heiromonk Gideon in the early nineteenth century. "When shellfish and kelp become unavailable as the tide flats are covered with ice, they consume even seal bladders, processed seal skins, thongs, and other things made of sinew." Gideon and the Russian Orthodox Church, in order to ameliorate the condition of the Indians, quarreled violently with the brutal naval officer Aleksandr Andreevich Baranov, and were responsible for the Tsar eventually recalling him. Treatment of the Alutiiqs eased after 1820. (Here is a little known historical byway: An Alutiiq man—whose father was Russian and whose mother was Alutiiq—became an Admiral in the Russian navy, led an expedition of exploration to North America, and eventually died in St. Petersburg.)

A major smallpox epidemic in 1805, and others in the 1830s, killed off an estimated half of the Alutiiq population and decimated entire communities. Dena'ina groups also suffered, especially in the Kijik and Tyonek areas. Fewer than 2,000 people survived on Kodiak Island. After 1840, the Russians relocated many communities close to their posts

and the Orthodox church became well established. Many once-thriving Kodiak villages were abandoned. The relocation enabled company administrators to exercise closer control over the headman *(toiony)*, who served at their pleasure. The toiony was responsible for assigning men to hunting parties and planning the hunt with Russian officials, with traditional leadership roles being integrated into company operations. As influenza reduced the number of men available for the hunt, so the Company introduced ever more draconian measures to maintain summer activity.

In 1867, Russia sold Alaska to the United States. The treatment of the Indians worsened under American rule, for the newcomers disrupted traditional life as a matter of policy. Otter hunting, now often in the hands of Chinese labor rather than Alutiiq labor, continued until the sea otter became virtually extinct by 1900. The hunt ended officially in 1911. Commercial fishing and salmon canning slowly became the economic staple of Alutiiq communities. After 1902, a settler named Jack Hobson helped the Dena'ina acquire canning and fishing jobs in Bristol Bay for a few weeks each summer. Meanwhile, Mt. Novarupta on the Alaska Peninsula erupted in 1912, spewing up to 3 feet (1 m) of ash over some villages close to the mountain. Feet of ash fell as far away as Kodiak. As the skies darkened, many people fled to sea in kayaks, convinced that the Day of Judgment was nigh.

Meanwhile, in Cook Inlet . . .

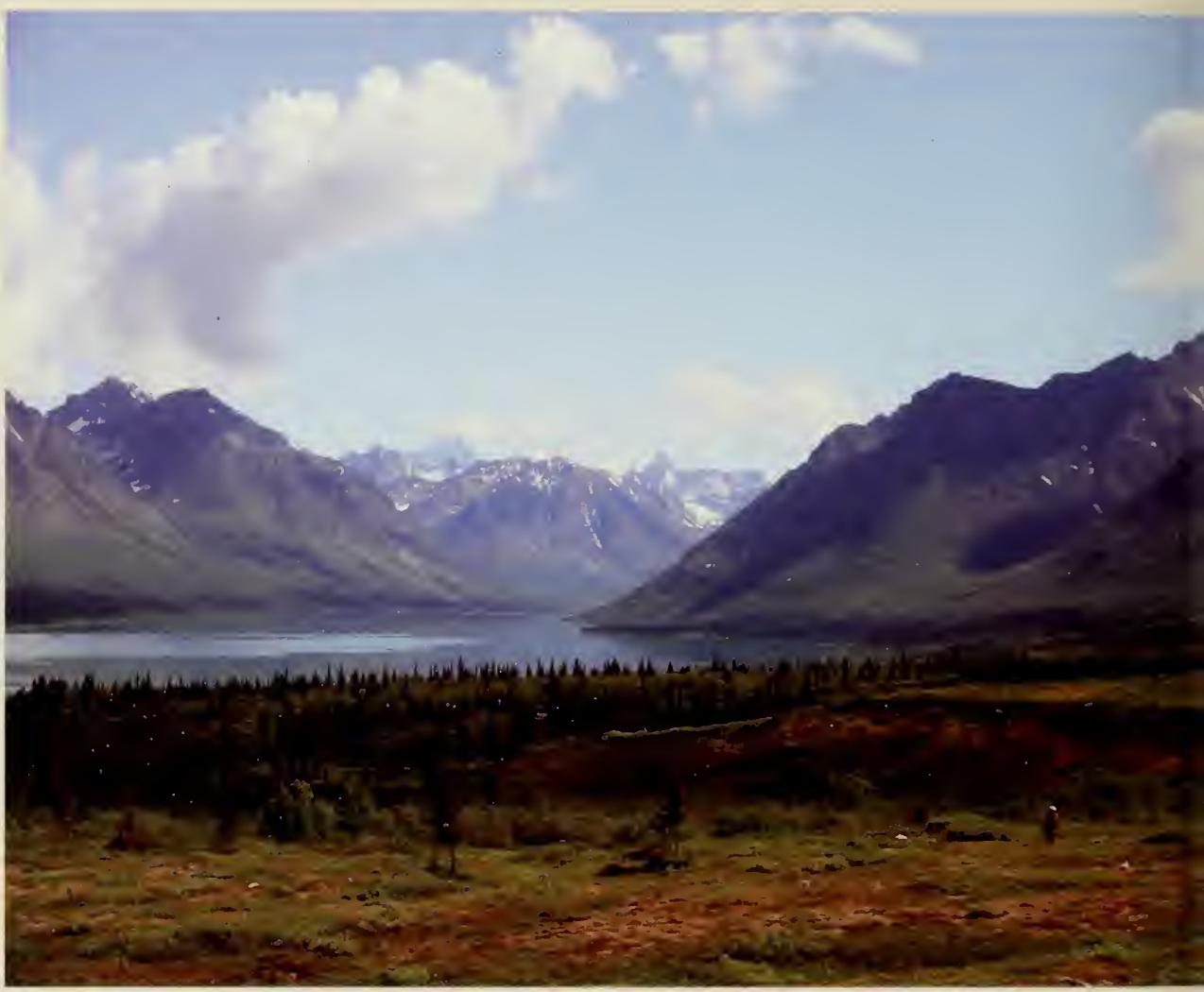
The Russians exercised less influence on the mainland, but there was some trading between the thinly populated Alaska Peninsula and Russian stations on Kodiak, and between Bristol Bay and the island. The Dena'ina were some of the first Athapaskan speakers to come in contact with the Russians.

In 1791, Baranov ordered Dmitrii Bocherov to explore the northern parts of the Alaska Peninsula on an expedition. He may have visited Lake Iliamna and the Nushagak River, and certainly heard of the existence of Lake Clark further inland, although he did not visit it. Bocherov visited the area at a time of violent competition between different Russian companies, which may have resulted in the plundering of the Iliamna and Nushagak settlements in 1792. By this time, there was a small fur-trading post on the Iliamna River, 6 miles (9.65 km) from the lake.

The Russians forced Dena'ina hunters to participate in the otter hunts by taking hostages, which caused bitter resentment. In 1800, frustration and anger boiled over. Several villages banded together and destroyed the Iliamna trading post. Only the son of the post leader survived the massacre. The Dena'ina did not allow another Russian trading station in their midst until 1821.

By then, the damage had been done. Exotic diseases had killed many Dena'ina within a few decades of first contact as the tentacles of the fur trade extended into the Inlet. As usually happens, such epidemics killed mostly the young and the old, wiping out generations of traditional lore. Iron tools, foreign clothing, and other artifacts became part of local culture. By the end of the Russian period in 1867, much traditional Dena'ina culture had vanished, preserved only in oral traditions and in isolated areas.

The Lake Clark area was somewhat off the beaten track for Russian traders. They had certainly heard of the lake, and even named it Kijik (Dena'ina: *Qizhjeh Vena*, "place where people gathered"), but apparently rarely if ever visited it, because it lay north of the major trade routes from Lake Iliamna to Bristol Bay. Charles L. McKay, a U.S. Army Signal Service observer from Nushagak village on Bristol Bay, who was also a collector for the Smithsonian Institution, may have visited the lake some time between 1881 and 1883, but the first well-documented visitors were the members of an expedition funded by *Frank Leslie's Illustrated Newspaper*



9.4 Upper Twin Lakes. NATIONAL PARK SERVICE

in 1891. Alfred B. Schanz and a small party, which included six Yup'ik guides, reached the lake on February 15 of that year. Schanz named it Lake Clark, after John W. Clark, the agent of the Alaska Commercial Company at Nushagak, who was one of the party. Clark had arranged the trip and supplied Schanz with food, dogsleds, and the Yup'ik guides.

The explorers arrived exhausted, battered by snowstorms and short of food, to be greeted by a well-dressed man attending his traps. He led them to "a typical Alaskan Indian village," where the people spoke a language "with a strong resemblance to that of the Tanaina Indians." The inhabitants wore a mix of European and traditional clothing, the headman resplendent in a cast-off Russian officer's blue swallow-tailed coat with brass buttons and cowhide top boots. "The houses and fish caches were neatly built of hewn logs and planks, the houses having windows made of tanned skins of mountain sheep intestine." The Russian influence was strong; there was a planked floor in the chief's dwelling, which was heated by a box-like Russian stove. Schanz learned that the villagers obtained trade goods from foreign posts on the coast. The village was named Nikhkak (historic Kijik), and was abandoned between 1902 and 1909.

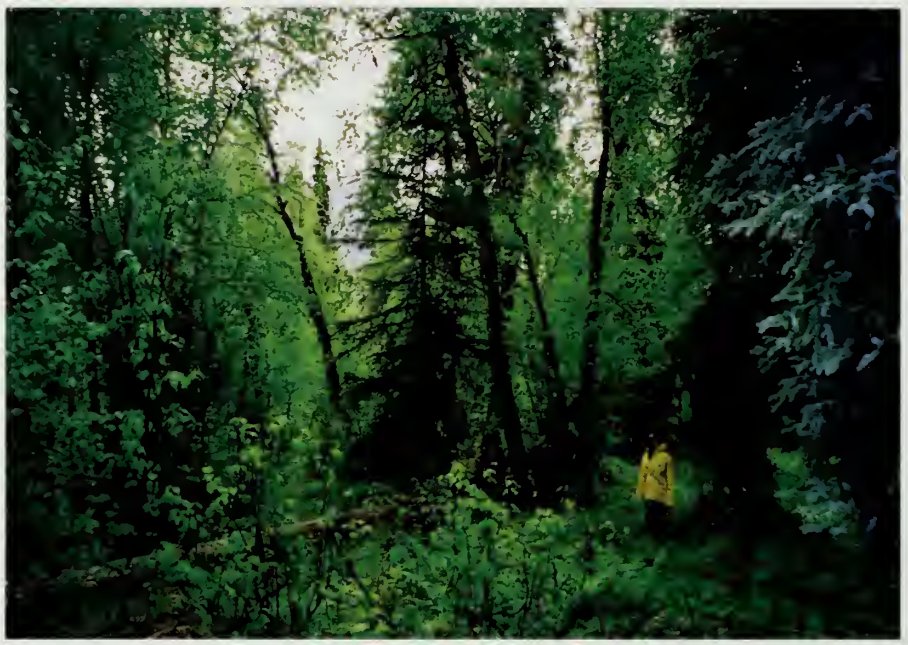
9.5 John W. Clark (1846–1896), photographed probably in San Francisco in the 1890s. PHOTOGRAPH COURTESY OF ELIZABETH NICHOLSON BUTKOVICH. NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION, NO. H-2306.

Excavations at Kijik

In 1965–1966, James VanStone and Joan Townsend, the latter the excavator of Clam Cove rock shelter, investigated a historic Dena'ina settlement named Kijik, which they identified as Nikhkak. The village, 27 miles (43 km) from the modern community of Nondalton, lies in an area where the Dena'ina have lived at various locations for at least 900 years, and is now a National Historic Landmark—probably the largest concentration of Athapaskan sites in Alaska. The Kijik village eventually grew to as many as 150 to 175 inhabitants, the population fluctuating depending on the time of year.

The Kijik River flows into the northern shore of Lake Clark, where the abandoned village lies on a bank about 6 feet (1.8 m) above the normal water level. The excavators identified nineteen structures, nine distributed at regular intervals along a dead river channel, the others clustered behind it. They tested all of them and also sank ten test pits into other parts of the site. Each house floor lay in a layer of sod or immediately below it, the sandy soil underlying this horizon making excavation a slow if relatively easy process. Most of them were from log dwellings, the horizontal timbers being laid directly on the ground. Informants from nearby Nondalton recalled that many of the houses were disassembled, the logs made into rafts, and then towed to old Nondalton, the forerunner of the present settlement, between 1902 and 1909. Such structures were numerous; at least 270 earlier, prehistoric house pits have been recorded in the 2,000 acre (809 hectare) Historic Landmark area since the VanStone and Townsend excavations.

9.6 Chief Zackar Evanoff and Mary Balluta Evanoff at Kijik in the 1890s. NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION, NO. H-72.



9.7 The difficulties of archaeology in the National Historic Landmark area near Kijik: An overgrown Dena'ina house pit. NATIONAL PARK SERVICE.

None of the dwellings was standardized. Most were rectangular or square, often with hearths in the middle. At least one also served as a fish-drying-and-smoking facility, with a large hearth and vertical racks in the middle. Another large house had a smoking and drying area and a bath house. Most structures had gabled roofs. VanStone and Townsend remarked that the houses were much modified from traditional designs and reflected architectural styles introduced by Russians and, to some extent, Americans. They found none of the raised log caches that were so common in traditional villages. Perhaps the inhabitants dismantled them when they moved away.

Kijik's church lay at the southwestern end of the settlement. The square building's logs stood directly on the beach, with a three-sided wall at the east altar end. A gabled roof, flat on the top, adorned the building. The remains of a Russian Orthodox cemetery lay along the beach.

The artifacts from Kijik included traditional ground-stone tools and antler harpoon heads, also arrowheads from the same material. However, metal was widely used, especially tinned steel plate from used cans, which was easily worked into a variety of dishes and other implements. One man had made a spear blade from a discarded soldier's bayonet. Expended cartridges became blunt arrowheads. Knives, scissors, and other domestic utensils appeared in most households. Imported manufactures included British and possibly American ironstone vessels that were widely traded in Alaska during the late nineteenth century, some glass bottles that once contained sarsaparilla, widely used as a tonic, and other medicines. The villagers owned common forms of trade beads that could be seen in almost any Alaskan community of the day. Their firearms included former military muzzleloaders and a repeater rifle.

The Kijik excavations show just how thoroughly European material culture had submerged the traditional by the late nineteenth century. Nevertheless, the inhabitants mostly subsisted off red salmon, as well as the same game as their ancient predecessors: predominantly caribou, a few moose, and numerous rabbits. The hunters clearly used dogs; their bones abounded in the village. Trapping occurred throughout the winter and into the summer months.

About the middle of July, red salmon spawned in huge numbers along the lake shore and in the small creeks near Kijik that run into Lake Clark. The local people camped nearby at a point where the water was shallow. By the time of the Schanz visit

9.8 Alaska Commercial Company store and trading post near Iliamna Bay. FROM M. W GORMAN, "THE LAKE ILIAMNA REGION, ALASKA," *PACIFIC MONTHLY*, MAY 1903.

in 1891, Kijik was very familiar with what American trading companies like the Alaska Commercial Company had to offer in exchange for furs trapped in the far interior. In its later heyday, the village was aggressively engaged in trade, to the point that it may even have at least partially entered a burgeoning cash economy. A flurry of interest in gold mining in the upper Mulchatna River area may have contributed cash to the village economy, as perhaps did the new industry of salmon canning after 1902.

The anthropologist Cornelius Osgood, who never visited the Lake Clark region, gave us a last glance at traditional Dena'ina culture when he published his *Ethnography of the Tanaina* in 1937. He found no traditional artifacts still in use, despite continued reliance on fish and game. However, archaeologists have found some bone harpoon heads used for taking king salmon at a kindred Dena'ina village on the Mulchatna River 60 miles (96.5 km) southwest of Kijik. The subsistence economy continued, with periodic supplies of canned foods and other European goods that came to even remote villages. Few people wore any form of pre-European clothing, except for some fur parkas. Occasionally, Osgood encountered an old woman with tattoos on her face. The old semi-subterranean houses of earlier times had vanished, but the overgrown pits were clearly visible surrounding modern settlements, only surviving in the form of rare fish smoke houses and occasional lean-tos built by hunters. Osgood wrote, "[Kayaks used to be so commonplace that] it would almost seem that the people were seldom out of these craft.

9.9 A boy wearing a squirrel-skin parka stands by a *baidarka,* holding a bow and arrow. FROM M. W. GORMAN, "THE LAKE ILIAMNA REGION, ALASKA," *PACIFIC MONTHLY*, MAY 1903.

9.10 Residents of Old Nondalton in 1936: Vladimir Cusma, Nick Karshekoff, Yvdakia Karshekoff, and Jean Karshekoff stand in front of a Russian Orthodox cross. PHOTOGRAPH COURTESY OF AGNES CUSMA. NATIONAL PARK SERVICE HISTORIC PHOTOGRAPH COLLECTION. NO. H-3.

Today, an ethnographer can travel from one end of the Tanaina area to the other without seeing a *kaiak, umiak,* bark canoe, or skin boat." Further, he noted, "Culturally speaking, the real Tanaina are dead or dying." He was wrong. While shamanism retained little influence even in remote communities, it was replaced by the ceremonial incense and chanting of Orthodox ritual. As was the case among the Alutiiqs, the church became a catalyst for preserving Dena'ina identity. A strong culture still thrives. Modern communities like Lime Village, Nondalton, and Pedro Bay still gather for traditional ceremonies, where elders sing and tell stories, although few of the young speak their ancestral language.

"Our Beliefs"

What has survived above all is a sense of identity. The Alutiiqs and Dena'ina suffered from forced acculturation under a U.S. government policy of enforcing an English-only policy in village schools, but many aspects of traditional culture survived, thanks to the stories passed from one generation to the next by elders and others—a form of mentorship. They preserved tales of ancient heroes and mythic beings, *ukgwepet*—"our beliefs." Alutiiq identity lies in what anthropologist Patricia Partnow calls "a person who grew up with these stories." The tales revolve around ties to the land, shared history and strong ties to the past. Alutiiq

language, kinship, and subsistence. The Dena'ina have similar close links to their ancient homeland.

In today's diverse world, no individual defines his or her identity on all these counts, but each person accentuates his or her Alutiiq or Dena'ina identity in diverse ways at different times. The Orthodox church plays an important role in this identity because of its history. When the Russians sold Alaska, the czarist government no longer supported the Alaska Orthodox church. Russian priests could no longer continue their work, so local churches became self-supporting, relying heavily on Native readers and lay people. Some Alutiiq and Dena'ina men entered the priesthood. The Orthodox church became strongly identified with Native people and their heritage, in sharp contrast to other Christian churches, which were associated historically with efforts to impose alien values on the Alutiiqs and Dena'ina.

Today the Alutiiqs live in twenty-five villages and in larger towns and cities, and work in many fields, everything from politics to fisheries, as do Dena'ina. Their surnames reflect generations of intermarriage with outsiders.

Both Alutiiq and Dena'ina identity stem from intricate negotiations with the contradictions of a complex history. People confront this historical legacy in different ways and make individual choices that are very different from those made by their recent, and remote, ancestors. Thanks to archaeology and oral history, we're just beginning to understand the complex tapestry of this past.

9.11 Building an *umiak,* using methods also employed by the Alutiiqs. The driftwood frame is complete and the men are fitting the skin cover. PHOTOGRAPH TAKEN IN 1939, LOCATION UNKNOWN. ©MARINER'S MUSEUM/CORBIS.

Appendix: Conserving Lake Clark Park's Rock Paintings

Between 2002 and 2005, conservator Monica Shah made a detailed condition assessment of Clam Cove and Tuxedni, which included studies of the geology, even of the lichens adhering to the rock faces. The Shah report, completed in 2006, stressed the inaccessibility of the two sites and expressed concerns about the impact of even a modest additional number of visitors on the fragile pictographs. Such extra visitation seemed inevitable, given the growth of Alaskan tourism, but if it occurred, it would have to be managed using strategies developed with the Native stakeholders in the sites.

The two sites offer different challenges in terms of visitation. Tuxedni is so remote that only seriously interested visitors are likely to reach the shelter. Shah stressed the importance of making sure, using interpretative signs, that visitors know that the Park Service monitors the paintings. Clam Cove is much easier to visit, but the paintings are not so clearly visible. Again, Shah recommended signage that both interpreted the paintings and explained the importance of conserving them and not touching the walls or scraping the black off the sandstone.

From tourism, Shah turned to conservation. She recommended that the paintings be drawn at full size, not just photographed, to ensure a complete record. An artist examining the art over periods of days, to ensure as complete an inventory as possible, should execute the drawings. Park staff should visit the sites at regular intervals to monitor the perceived deterioration of the art, which had faded considerably since de Laguna's visit in the early 1930s.

Was the art fading rapidly, or, as Shah suspected, at a slower tempo? She stressed some unique local factors that could affect the paintings—the fluctuation of beach sand at Clam Cove, the potential removal of vegetation in front of the Tuxedni rock face, which might cause more lichen growth, and the fundamental problem of the lichens growing on the rock surfaces in the first place. Shah recommended that the rock-face lichens be monitored but not removed for the time being. There was no effective removal strategy that came to mind, certainly not the use of bleach or scrubbing, which would add soluble salts to the rock faces or cause abrasion of the surface. Maybe, in the future, new experimental laser removal methods would be effective.

Shah visited the issue of moisture and, again, recommended no action because the installation of artificial drip lines on the face was impracticable on these particular rock surfaces. Nor did she advocate consolidating the rock surfaces, on the grounds that no known treatment would be fully effective. And the sheer rarity of the sites made it unethical to remove large samples of pigment from the walls for dating purposes. (Large samples would be needed, owing to the tiny organic components in the pigment.) Above all, she urged caution in implementing any conservation methods that were what she called "interventive," for rock-painting conservation is still in its infancy.

The next stage in developing a Preservation Plan for the sites involves extensive consultation with descendent Native American groups and other local interests, a process that has hardly begun. The pictographs in the Lake Clark Park are gradually deteriorating and will eventually vanish, unless some proactive conservation measures are taken within a generation. Unfortunately, state-of-the-art conservation methods are at present inadequate to slow or stop the process of disappearance. All the Park Service can do is maintain meticulous records of the art, using digital color photography and infrared film and commissioning full-scale drawings of the pictographs. This will at least ensure that there is a permanent record if conservation methods never materialize and the paintings slowly fade into historical oblivion. At the same time, the Park Service can create resources that foster greater public awareness of the need to preserve archaeological sources.

Learning More

I consulted a wide range of sources while writing this book, many of them dauntingly specialized. The archaeology of the Cook Inlet and adjacent regions is enshrined in a complex, often confusing, and highly technical literature that even specialists can find difficult to navigate. Archaeological, ethnographic, and linguistic publications also offer serious challenges for the lay reader. I hope that the books and other references listed here will guide you into the intricacies of the academic literature. They are but a tiny fraction of a huge body of publications and, inevitably, I've omitted important monographs and articles here.

Chapter 1: Setting the Stage

The Lake Clark National Park and Preserve Web site is an excellent starting point: <http://nps.gov/lacl/>. A general survey of Alaskan and Arctic archaeology can be found in Don E. Dumond, *The Eskimos and Aleuts*, 2nd ed. (London and New York: Thames and Hudson, 1987). For general information on Arctic peoples, see D. Damas, ed., *Handbook of North American Indians, Volume 5: Arctic* (Washington, D.C.: Smithsonian Institution Press, 1984). See also W. W. Fitzhugh and A. L. Crowell, eds., *Crossroads of Continents* (Washington, D.C.: Smithsonian Institution Press, 1988).

Chapter 2: The First Settlers

Endless debate surrounds the first settlement of the Americas, and dispassionate summaries are rare. An entertaining and opinionated account is provided by James Adovasio and J. Page, *The First Americans* (New York: Random House, 2002). Read this in conjunction with Tom Dillehay, *First Settlement of the Americas* (New York: Basic Books, 2000). Theories of the coastal settlement of North America are relatively recent in the literature, but a well-argued summary is offered by E. James Dixon, *Bones, Boats, and Bison: Archaeology and the First Colonization of Western North America* (Albuquerque: University of New Mexico Press, 2000). For a useful overview of the issues, see David R. Yesner, "Origins and Development of Maritime Adaptations in the Northwest Pacific Region of North America: A Zooarchaeological Perspective," *Arctic Anthropology* 35, no. 1 (1998): 204–222. For information about Ugashik, see W. Henn, *Archaeology on the Alaska Peninsula: The Ugashik Drainage, 1973–1975* (Eugene: University of Oregon Anthropological Papers 14, 1978). See also William Workman, "Human Colonization of the Cook Inlet Basin before 3,000 Years Ago," in Nancy Yaw Davis and William E. Davis, eds., *Adventures through Time: Readings in the Anthropology of Cook Inlet, Alaska* (Anchorage: Cook Inlet Historical Society, 1996), pp. 25–33. For a first-rate paper on all you need to know about the later archaeology of Bering Strait and more, see O. K. Mason, "The Contest between the Ipiutak, Old Bering Sea, and Birnirk Polities and the Origin of Whaling during the First Millennium A.D. along Bering Strait," *Journal of Anthropological Archaeology* 17 (1998): 240–325.

Chapters 3 and 4: Exploiting the Shore and The Alutiiqs

For a superb introduction to Alutiiq history, archaeology, and identity, with lavish illustrations, see Aron L. Crowell, Amy F. Steffian, and Gordon L. Pullar, eds., *Looking Both Ways: Heritage and Identity of the Alutiiq People* (Fairbanks: University of Alaska Press, 2001). This was a fundamental source for Chapters 3 and 4 of this book. A perspective on the Alaska Peninsula is offered by Don E. Dumond, *A Naknek Chronicle: Ten Thousand Years in a Land of Lakes and Rivers and Mountains of Fire* (King Salmon, Alaska: Katmai National Park and Preserve, 2005). Mink Island: J. Schaaf. In the press.

"Mink Island." In Francis P. MacManamon et al. *Archaeology in America: An Encyclopedia*. Westport, CT: Greenwood Press. For information about the Pedro Bay site, see Douglas R. Reger and Joan B. Townsend, "Prehistory at the Pedro Site (ILI-001), Alaska," Report to the Pedro Bay Village Council and the National Park Service, 2004. Other useful papers include the following: Aron L. Crowell and Daniel H. Mann, "Sea Level Dynamics, Glaciers, and Archaeology along the Central Gulf of Alaska Coast," *Arctic Anthropology* 33, no. 2 (1996): 16–37; Ben Fitzhugh, "Colonizing the Kodiak Archipelago: Trends in Raw Material Use and Lithic Technologies at the Tanginak Spring Site," *Arctic Anthropology* 41, no. 1 (2004): 14–40. See also William B. Workman, "Archaeology of the Southern Kenai Peninsula," *Arctic Anthropology* 35, no. 1 (1998): 146–159. For information about the Arctic Small Tool Tradition, see William Workman and Peter Zollars, "The Dispersal of the Arctic Small Tool Tradition into Southern Alaska: Dates and Data from the Kenai Peninsula, South Central Alaska," *Anthropological Papers of the University of Alaska*, New Series 2, no. 1 (2002): 39–49.

Chapters 5, 6, and 7: Tuxedni Rock Shelter, Clam Cove, and Ancient Painters

Any research on writing about Tuxedni and Clam Cove begins with Frederica de Laguna, *The Archaeology of Cook Inlet, Alaska* (Philadelphia: University of Pennsylvania Press, 1934). Chapters 5, 6, and 7 are based on Melissa Baird's seminal research on Tuxedni and Clam Cove, which is covered in her monograph: Melissa Florence Baird, *Analysis of the Clam Cove (49-SEL-006) and Tuxedni Bay (49-KEN-229) Pictograph Sites, Lake Clark National Park and Preserve, Alaska* (M.A. Thesis submitted to the University of Oregon, 2003, completed for the National Park Service, Anchorage). Two other papers by the same author are important sources: Melissa F. Baird, "Whales, Boats, and Anthropomorphs: Iconographic and Contextual Analyses of Two Pictograph Sites in Lake Clark National Park, Alaska," *Journal of Northwest Anthropology* 38, no. 2 (2001): 179–194; Melissa F. Baird, "Frederica de Laguna and the Study of Pre-Contact Pictographs from Coastal Sites in Cook Inlet and Prince William Sound," *Arctic Anthropology* 43, no. 2 (2006): 136–147.

For the conservation report for Tuxedni and Clam Cove, see Monica Shah, *Preservation Plan for Tuxedni Bay and Clam Cove Pictograph Sites, Lake Clark National Park and Preserve* (Report submitted to the National Park Service, Anchorage, 2006).

Chapter 8: The Dena'ina

A fundamental source is Cornelius Osgood, *The Ethnography of the Tanaina* (New Haven: Yale Publications in Anthropology 16, 1937, reprinted by Human Area Relations Files Press, 1966). See also Priscilla R. Kari, *Tanaina Platlore, Dena'ina K'et'Una: An Ethnobotany of the Dena'ina Indians of Southcentral Alaska*, 4th ed. (Anchorage: National Park Service, 1995). For Dena'ina stories, see Brian Swann, ed., *Coming to Light* (New York: Random House, 1994). Peter Kalifornsky's work is quoted in Chapter 8, a full account being in Peter Kalifornsky et al., *A Dena'ina Legacy: The Collected Writings of Peter Kalifornsky—K'tl'egh'i Sukdu* (Fairbanks: Alaska Native Language Center, University of Alaska, 1991). For information about place names, see James M. Kari et al., *Shem Pete's Alaska: The Territory of the Upper Cook Inlet Dena'ina* (Fairbanks: Alaska Native Language Center, University of Alaska, 1987). Other studies: Linda J. Ellanna and Andrew Balluta. 1992. *Nuvendaltin Quht'ana: The People of Nondalton*. Washington DC: Smithsonian Institution Press. Also: Alan Boraas. 2007. "Dena'ina Origins and History." In Karen K. Gaul. Ed. Pp. 31-40. *Nanustset ch'u G'udi Gu: Before Our Time and Now*. Anchorage: National Park Service.

Chapter 9: Contact

For information about Captain Cook, see J. C. Beaglehole, ed., *The Journals of Captain James Cook on His Voyages of Discovery,* vol. 3 (Woodbridge, England: Boydell Press, 1968). The same author's *The Life of Captain James Cook* (Stanford: Stanford University Press, 1974) is the definitive biography. For information about Russian colonization, see Lydia T. Black, "The Story of Russian America," in *Crossroads of Continents,* ed. W. W. Fitzhugh and A. L. Crowell (Washington, D.C.: Smithsonian Institution Press, 1988). See also Lydia T. Black, *Russians in Alaska, 1732–1867* (Fairbanks: University of Alaska Press, 2004). For information about the Kijik site, see James W. VanStone and Joan B. Townsend, *Kijik: An Historic Tanaina Indian Settlement* (Chicago: Field Museum of Natural History, Fieldiana Anthropology 59, 1970).

Dena'ina man's shirt decorated with quillwork. Adolf Etholen Collection, National Museum of Finland. REPRODUCED WITH THE PERMISSION OF THE NATIONAL BOARD OF ANTIQUITIES OF FINLAND, HELSINKI

Additional photography; www.iStock.com / (p.32) Suzann Julien, (p.44) Sandra vom Stein, (p.57) Frank Leung, (p.72) Paul Tessier, (p.87) Suzann Julien, (p.88) John Pitcher, (p.112) Roman Krochuk.

The raven symbol. PHOTOGRAPH BY J. HENDERSON, COURTESY OF THE NATIONAL PARK SERVICE

LAKE CLARK NATIONAL PARK AND PRESERVE is a spectacular, yet little known, jewel of the National Park System. Glaciers, lakes, mountain ranges, tidal rivers, and active volcanoes provide breathtaking scenic vistas that are among the finest in Alaska. Relatively few people visit the Park, which is only a short distance from Anchorage by Alaskan standards, yet people have hunted, fished, and foraged here for at least 10,000 years. *Where We Found a Whale* tells the story of the diverse human groups who have settled around Lake Clark, in an area that became a frontier between Alutiiq maritime peoples and Dena'ina hunter-gatherers, who settled in the Park many thousands of years ago. The story begins with first human settlement, followed by appearance of early inland and maritime peoples around the Outer Cook Inlet, and describes their increasingly sophisticated adaptations to a rich, but demanding environment. Much of the story focuses on two unique, yet little known, sites in the Park, Tuxedni rockshelter and Clam Cove cave, where whaling skippers painted vivid depictions of their hunts many centuries ago. We learn how the Lake Clark region was a constantly shifting frontier between Alutiiq and Dena'ina groups, also of ancient whaling practices, and of the dramatic impact of European exploration and colonization on the region. *Where We Found a Whale* is a lavishly illustrated account of thousands of years of hitherto obscure Alaskan history, which places one of America's great National Parks in a wider historical context.